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## A HOUSE SURGEON'S MEMORIES OF LORD LISTER\*

### His Struggle Against Indifference and Criticism—His Nobility of Character and Faith in His Mission—Final Recognition and the Revolution of Surgery

By SIR ST. CLAIR THOMSON, M.D., HOUSE SURGEON TO MR. JOSEPH LISTER IN 1883, LONDON, ENGLAND

AS we all know, Robert Browning lived a great part of his life in Italy, and died there. Many years before that event, another of our greatest poets, Percy Bysshe Shelley, was drowned off the coast of Leghorn and now lies buried in the Cimitero degli Allori, just inside the walls of ancient Rome. This was some time before Browning settled in Florence, and thus it came to pass that when, once in Italy, Browning made a friend who had known Shelley personally, he was so overcome by the thought that he was looking into the eyes of one who had actually gazed on Shelley, in his very habit as he lived, that he wrote of it in these lines:

"Ah, did you once see  
Shelley plain,  
And did he stop and  
speak to you,  
And did you speak to him  
again?  
How strange it seems,  
and new!"  
It has struck me  
that before the gener-

ation to which I belong passes away, it is a duty, as it is a very grateful task, for those who once saw Lister plain, to put on record some of our personal recollections and impressions of that great man, great, not only in that his name, as a scientific surgeon and a benefactor of humanity liveth

for evermore, but in that he exerted on those who knew him an influence, a devotion, and an elevation of thought and soul that had in it a touch of inspiration. We have all had breathed into us a breath of the great spirit, in very varying degrees. In commenting on a paper of mine on "Shakespeare and Medicine," that well-known authority on Shakespeare, Sir Sidney Lee, said that Shakespeare, after God, had created most in the cosmic universe. I venture to say that, as an instrument in God's hands, Lister had wrought more for the relief of human suffering, for the security of human life, for the prevention of



Fig. 1. Lord Lister.

\* An address delivered before third-, fourth-, and fifth-year students at the Royal Victoria Hospital, Montreal, in May, 1919.

human anxiety, and the promotion of human happiness than any one man who has ever trod this earth. And, in addition, those who chanced to come near him caught glimpses of a spirit such as is seldom revealed to us.

"Such harmony is in immortal souls,  
But while this muddy vesture of decay  
Doth grossly close it in, we cannot hear it."

On Monday, October 1, 1877, I entered as a student at King's College, London, attracted there entirely by the great name of Lister, to whom my attention had been directed by a brother who had been his pupil in Glasgow. On that same first day of October, 1877, Lister, coming from Edinburgh, entered on his duties as professor of clinical surgery in King's College Hospital.

Educated at University College and a graduate of London University, Lister had already achieved what some would think the success of a lifetime, in that, though an Englishman by birth, he had migrated to Scotland and had there successively filled the chair of surgery in the two great universities of the North—in Glasgow from 1860 to 1869, and in Edinburgh from 1869 to 1877. He had been working at the process of healing in wounds and the best method of promoting it all that time; the so-called "antiseptic system" had been evolved in Glasgow and developed in Edinburgh. I say advisedly "so-called system," for, almost through his whole life, Lister had to fight hard in defense of the principles on which he based his methods of wound treatment; the methods employed were, of course, subject to constant revision, alteration, and improvement, and so could not sclerose into "a system," though the principles remained fixed. But the unthinking crowd, even in a learned profession like ours, shies at principles and always wants to pin the wings of thought down on to the cardboard of what the Englishman likes to call "practical methods." Hence Lister's treatment of wounds was frequently called the "carbolic method," or the "gauze and spray system." He once said to me that he expected to spend his life searching for an antiseptic that was not irritating. In these efforts, he moved from carbolic lotion to boracic, or made trial of corrosive sublimate, and then reverted to carbolic; or he saturated his gauze with carbolic acid iodoform, eucalyptus, or double cyanide of mercury. These seekings after truth were all causes for stumbling to the average individual, who loves finality and a ritual which he can adopt—no matter if he does so unthinkingly—so long as he can carry on with it indefinitely. This appreciation of general principles, so natural to the logical Latin mind of France and Italy, is strikingly wanting in the na-

tional character of England. As Matthew Arnold says, we have no sense of the idea. This is strange when we recollect that some of the greatest abstract thinkers have belonged to the British Isles—Hume, Hamilton, Locke, John Stuart Mill, Bain, Adam Smith, Herbert Spencer. But, on scrutinizing these names more closely, we cannot help noting that the majority of them indicate that their owners came from north of the Tweed. Certainly in Scotland Lister had a far larger and more devoted following of pupils than he ever gained in London. In Edinburgh the number of students who crowded the theater to attend his regular course of clinical surgery frequently exceeded four hundred, and foreign surgeons from all the countries of America and Europe, and even the outmost dwellers of Mesopotamia had been flocking for years to Glasgow and Edinburgh. A few, a very, very few young surgeons from London had ventured north to see and hear about this new antiseptic method of treating wounds, the two most notable being Lister's own nephews—Marcus Beck, afterward on the staff of University College Hospital, and Rickman Godlee, later on, president of the Royal College of Surgeons and the author of that biography of his uncle which every physician should read.

What induced Lister to leave the high position he had in Edinburgh, his wards of sixty to seventy beds in the Royal Infirmary, and these crowded classes of attentive students, to come to a small school in London where only twenty-four beds were allotted to him and where the students of all four years together (the curriculum was then a four-year one) amounted to only one hundred and forty-two? In Edinburgh the average annual entry of medical students was over one hundred and eighty; in King's College it was less than twenty-five. In London, instead of the university spirit of the northern capital, he was sure to be met with the insularity and parochialism which is perhaps more marked in London than in any other spot in the United Kingdom. His coming was not in order to have a larger field for private practice. Always blessed with a sufficiency of private means, Lister at no time courted the pecuniary rewards of practice, and he died a comparatively poor man. It was not to hunt for honors or distinctions; Lister, brought up a Quaker, thought little of such adornments. All who knew him are convinced that he accepted the invitation to come south simply and solely because he felt that on the larger and more central stage of the metropolis he could so demonstrate his work that he would the sooner fulfill his mission and win the whole world to accept his principles. In taking leave of his class in Edinburgh he ex-



pressed the pleasure that, under the risk of having his motives in leaving Edinburgh for London quite misunderstood, so large a number of Edinburgh students did really believe what was the truth—that it was only a sense of duty which had made him come to the decision to leave that school. He added that it was a wrench to leave a school in which he had received great kindness, and to take a cold plunge into what might prove to be a sea of troubles.<sup>1</sup>

He was indeed right. A cold and stormy sea of trouble was awaiting him. Lister returned from professorships in the Scottish universities to his own southern people, to the city of his birth and the country of his own form of faith. He returned to his own and his own received him not.

On Monday, October 1, 1877, as already recorded, I entered King's College, London, as a student and Joseph Lister entered it as a professor. But, in addition, on that day he also delivered the introductory address of the session 1877-1878. These inaugural orations have nearly died out; at that time they were almost universal. As a rule they were devoted to pointing out to freshmen the nobility, responsibilities and privileges of the profession to which they were about to devote themselves, and to urging them by hard work, simple living, and high thinking to make themselves worthy of it. They were, as a rule, friendly functions; the usual oration did not make too much demand on our thinking capacity, and we all came away cheered, as we always are, by a call to high endeavor and to make our reach exceed our grasp, "else what's Heaven for?" As a rule they were limited to the past and present students of each school.

But Lister, to most people's astonishment, opened his address by stating that he was going to record some experiments he had made—"during his holidays," forsooth—"to obtain some positive and definite knowledge of the essential nature of a class of phenomena which interest alike the physician, the surgeon and the accoucheur, viz.: the changes in organic substance which are designated by the general term 'fermentation.'"<sup>2</sup> This address was delivered from behind a table, covered with pipette, test-tube stands, glass flasks, tubes containing milk and blood, and the other paraphernalia required to demonstrate Lister's contention that neither milk nor blood had any inherent tendency to putrefaction and that if either of these fluids was drawn and preserved under what we should nowadays call "sterile conditions" it would remain free from putrefaction indefinitely. This is all accepted doctrine nowadays, when "all can raise the flower,

now all have got the seed." But, although it was not so forty-one years ago, I need not deal further with the lecture, which can be read in full in the *British Medical Journal* of that year. What I would like to recall is that although the large theater in the college was crowded from floor to ceiling, and although Lister had a warm reception from former pupils and distinguished men of science, and although many surgeons had, on this opening day of the session, left their own schools to come and hear him, yet it was generally thought that the subject was inappropriate, that such an abstruse subject as lactic acid fermentation had no concern for a professor of surgery, that Lister did not seem the sort of teacher to show a student how to get through his examinations, that this man fiddling about with flasks and test tubes and talking about "putrefactive fermentation" could not be the "practical man" so dearly beloved in that Victorian generation, a generation which could not possibly have imagined that a medical man like Clémenceau could write novels and yet at seventy-five years of age be the leader of a great nation like France, or that a soldier like Foch might write books on war, be a lecturer in a military academy, and yet lead to victory the greatest army the world had ever seen, or that a college professor like Woodrow Wilson would be elected as their president by a nation of one hundred millions of practical people.

I sadly confess that at Lister's opening address we students were bored and we showed it. Forty-one years ago it was not thought to be discourteous or bad form to disturb a lecture or even to "kick up a row." Consequently we shuffled our feet and reminded the lecturer, sotto voce, that his hour was up and that it was tea time! When he was describing his investigations in the fermentation of milk, he had occasion to refer to the cowhouse and to cows, and then we booed, and, if he mentioned the dairymaid, we said "Tut, tut," and thought ourselves very funny fellows!

This first plunge at the college was certainly chilly, but it was at the hospital that Lister encountered his full sea of troubles. He had stipulated that he should be allowed to bring with him from Edinburgh four assistants already trained in his methods and attached solely to his service. This was a cause of offense; firstly, because it was held that any dresser could learn to employ carbolic lotion and gauze, just as previously he had learned to apply water-dressing or oakum; and, secondly, because in those days operations were so uncommon that a single house surgeon and one theater had previously sufficed for all the three senior surgeons of the staff. The house

1. Brit. Med. Jour., August 4, 1877, ii, 145.

2. Brit. Med. Jour., October 6, 1877, ii, 465.

surgeon whom he brought with him came from the Shetland Isles. His name will not be unknown to you as Sir Watson Cheyne, who later succeeded his master as professor in King's College Hospital, served as president of the Royal College of Surgeons, and, now retired from practice, is an active member of Parliament. The senior dresser came from this side of the Atlantic, Dr. John Stewart of Halifax, Nova Scotia, is one of the most affectionate pupils of the master, whom he has drawn in many telling pen pictures. From 1878, when I had last seen him acting as dresser in London, forty years passed before we met again. I found him a year ago following the flag in France, serving in his seventieth year as head of a Canadian hospital in Havre.

Vexatious opposition to Lister and his energetic though humane work came chiefly from the nurses. In those days the hospital did not control its own nurses; the nursing was, so to speak, leased out to a body which was more a religious sisterhood than a nursing staff. This consisted of the Sisters of St. John, an Anglican community much given to ritual, repression, frigid rules, the exaltation of what they thought the religious care of the patient above his medical well-being, and withal, with a mailed fist ever clinched and ready for any helpless student, resident, or even member of the staff, who showed any tendency to *lèse majesté*. I could many a tale unfold of these far-off days and battles long ago between the nursing and the medical staff. I only mention them because Lister suffered more than any other member of the staff from their petty restrictions, their frigid rules, and their repressive formality. They made themselves particularly obnoxious to Lister as he gave more work than any other surgeon; he visited his wards daily, instead of twice a week; he had the boldness to show himself at the hospital after dinner, or even on a Sunday if a case gave him any anxiety; the technique of his dressings involved much washing-up and the spreading of mackintoshes to limit the effects of the clouds of watery carbolic spray in which we then worked; at least two hours daily were taken up by dressings, which Lister insisted on carrying out himself or seeing carried out under his own eye; there was much disturbance in the wards by his having patients carried or wheeled into the operating theater for his regular clinical demonstrations; in fact, he upset these pious ladies by disturbing the atmosphere they had created, an atmosphere which clearly suggested that medical men were allowed on sufferance in a hospital to do an operation or write a prescription, but that it was the nursing which took first place and that the all-important points

were that the bed should be stiffly tidy, the patient's face shinily clean, and that he should say his prayers!

Worse than these two cold douches was what John Stewart describes as the colossal apathy, the inconceivable indifference, shown by the students and surgeons of London. The wards of most of the hospitals in England at that time stank with the hospital air of putrefaction. I remember the tin trays placed below an amputated stump to catch the dripping pus, and the frequency with which in the post-mortem room we saw the amyloid degeneration which indicated the patient's long and weary passage to the grave with hectic and surgical fever. Lister's wards were sweet; his dressings, when taken off, were free from putrefactive odor; they were handed round for confirmation, and I can remember the surprised and approving sniff with which the visitor—generally a foreigner—confirmed Lister's frequent pleased remark: "You will note, gentlemen, that the discharge is serous and quite sweet." Yet Londoners did not come to see this revolutionary change, to hear, to smell, and to be converted.

In Edinburgh his class frequently numbered four hundred students; in London some ten to twenty might turn up, but these gradually fell off. I have heard a carefully prepared, thoughtful, philosophic lecture, one which helped to lay the very foundation of a physiological understanding of our work, delivered by Lister to half a dozen men, and many a time I have seen him at work in theater or ward, accompanied only by his own suite. When complete this consisted of six dressers, three clerks (who must all have previously served as dressers), and his house surgeon. Each office lasted for six months. It was only the enthusiasts, or those who had some inkling that they were serving a great master, who cared to give six to eighteen months to receiving this precious instruction in the science and principles of surgery. The rest cared for none of these things; they were indifferent; they were utilitarians, who, with what the world might in its foolishness call "shrewd common sense," saw that Lister's teaching was no use to them, for he did not coach them in the subjects required for examinations nor hand round the tips which were to get the student through his examination. Lister noticed that though the London student has an affection for his school, he has none for the University of London where he graduates, or for the Royal Colleges where he takes his diploma, and hardly any for the city in which he studies. The Scotch student has more *esprit de corps* and more *feu sacré* in following a teacher or getting



to the root of a subject. (Strange that we have to employ French words to explain these un-English traits.) The English student is keener on securing a diploma with which to earn his living. But is he entirely to blame for this? In London much is sacrificed to the examination system, which encourages cramming, stifles any spirit of inquiry or love of knowledge for its own sake, and compels the teacher to limit his instructions to preparing the student to pass, not only certain examinations, but certain examiners. The complete separation of teacher from examiner also handicaps the student. It is not the student who is to blame; it is our faulty methods of teaching and examination. Ten years later Lister referred to his small classes at King's, after his crowded audiences at Edinburgh, as "a humiliating experience."

But, if students and London surgeons were apathetic and short-sighted over the revolution being wrought in surgery, it was not so with the foreigners. In the entrance hall of the old hospital there was a notice board in English, French, and German, forbidding smoking, thus:

Smoking forbidden

Il est defendu de fumer

Das Reuchen ist verboten

In later years many must have wondered when the necessity had occurred for this polygot announcement, for it was rare for any Frenchman or German to find his way there, and, if he did, he was so solitary and felt so much the repressive atmosphere of our misty island, that he could hardly have the hardihood to light an innocent cigarette. But it was different in the eighties. When I was Lister's house surgeon in 1883, foreigners poured in from the ends of the earth, crowded the entrance hall, and there, while waiting for the master, they would make the air thick with tobacco smoke. Twenty to sixty of them would fill the front seats of the lecture theater; indeed, I remember a time when the students complained of this and also of the fact that not infrequently Lister gave half his lecture in French or German, for he could make an extempore speech quite easily in either language. This complaint came round to Lister's ears and I remember how on a quiet day he took the opportunity to refer to it, saying that if the students showed as much enthusiasm as the foreign visitors he would see to it that they were not ousted from the best seats. Like all his little corrections, this was said most courteously and more in sorrow than in anger.

Among the visitors from overseas we made many interesting acquaintances. I remember an American surgeon turning up one day who told

me he had been to Vienna to see Billroth but he did not consider him equal to a bully operator they had in Buffalo—the town from which the visitor came. He arrived at the hospital on Saturday just before lunch, and I told him Lister was not expected till two o'clock. He said he would wait, and asked if he could not look around the hospital in the meantime. I had the happy thought of turning him over to the secretary, whom he dragged all over the building, reducing that poor functionary to a limp mass before two o'clock. When the master arrived, our visitor said "Professor Lister, sir, I am told your wounds heal without suppuration and I've come all the way from Buffalo to see them." The ever-courteous professor said he was sorry, but that no cases required dressing that day; that the next day was a Sunday and that, as he had no class, he would be changing the dressings in the morning. The irrepressible visitor said, "No matter, I'll be there." And there he certainly was, on the Sunday morning. When all had been shown him he exclaimed, "Sir, I was like the doubting Thomas in the scriptures. I would not believe without seeing; and, like Thomas, I've seen and now I believe. Buffalo shall hear of this." Need I add that this easy reference, without a prefix, to a New Testament saint, and this breaking in on the Sabbath morning calm of the disciplined wards caused the caps of the high church Sisters of St. John to stand straight up from their heads? Lister beamed; he had no insular prejudices and always liked the expansive manners of foreigners.

How different to this chilly English reception of 1877 was that extended to him only two years later at the International Medical Congress at Amsterdam. *The British Medical Journal* of 1879 (vol. ii, page 453 thus describes how Lister was received by the whole congress with an enthusiasm which knew no bounds.

"When he stepped forward to open his address (which was delivered, with but few notes, in improvised French) the whole assembly rose to their feet, and, with deafening and repeated rounds of cheers, waving their hats and handkerchiefs, hailed the distinguished professor of King's College with acclamations renewed minute after minute, and time after time, as his name was again shouted forth by some grateful, enthusiastic acolyte. This remarkable scene—unprecedented, we imagine, in the history of medical science—continued for some minutes, until Professor Donders, the president, advancing with the distinctive grace and dignity for which he is remarkable, and taking Lister by the hand, as he stood overwhelmed with this magnificent ovation, obtained a moment's silence, and addressing him, said, 'Professor Lister, it is not only our admiration which we offer you; it is our gratitude, and that of the nation to which we belong.'"

Foreign surgeons attending the next Interna-

tional Medical Congress (it was in London in 1881) must have marvelled amongst themselves when they heard London and British surgeons attempt to cast doubt on the principles which Lister had evolved and belittle the results he had given by basing his practice on them.

But when the International Medical Congress again met in London in 1913, the light of Lister's good work was shining before men, although his body had been buried in peace. As we all know, congresses and such like events are commemorated by the issue of a medal. In monarchical countries it is a usual custom to engrave the head of the reigning sovereign on one side of the medal; and the medal of the International Medical Congress in London in 1881 bears on the obverse the effigy of Queen Victoria. But in 1913, it was felt in Britain that there was only one effigy worthy of being stamped on the medal of a congress in London and that was the head of Joseph Lister.

My readers will hardly believe me when I tell them that in my student days the surgeon of one of the largest teaching hospitals could always raise an appreciative laugh by telling anyone who came into the operating theater to shut the door quickly in case one of Mr. Lister's microbes came in. Nor can they credit it that, as late as the nineties of last century, another leading surgeon had the courageous ignorance to publish the results of an experiment he made in which the patients on one side of a ward were treated by the older methods—water dressings, poultices, lint, oakum, strapping, ointment, etc., and those on the other side with Lister's "antiseptic method." The fact that Lister would never publish his statistics was another cause of offense. How could he, when he was carrying out operations never attempted before in the history of surgery?

The first case in which Lister wired a fractured patella—I suppose the first case in the world in which a healthy knee joint was ever opened for such a purpose—was in 1877. When I was his house surgeon I had the honor of bringing together the first seven cases which he showed before the Medical Society of London in October, 1883.<sup>3</sup> Some of them had been recent and others old un-united fractures. All were successful. I remember the astonishment with which fellows of the society tried to feel the buried silver wire, and the surprise with which they heard that one patient had returned to his occupation as a bus conductor and was able to hop off and on his step and climb the bus stairs. But others were present who were aghast at the unwarrantable danger incurred in opening a healthy knee and so running the risk of ankylosis or of amputation,

and even death. One surgeon said that if the next case died Lister should be prosecuted for malpractice, and another exclaimed that "*C'était magnifique mais ce n'est pas la chirurgie.*" In his reply Lister simply said that he considered that was *chirurgie* which saved people's lives.

The public had not heard his name then nor for many years afterward. I remember soon after starting practice, I thought I would strengthen my position in one family by mentioning—quite casually of course—that I had been house surgeon to the great Joseph Lister. "Yes," said the patient, "a great man; he must have made a pile of money out of Listerine!"

I remember, when house surgeon, telling Dr. Lionel Seale that I had just seen Lister resect a piece of rib in order to drain a pleural empyema. He was horrified and said I surely meant that Lister had simply tapped the pleura; and, when I assured him of the fact, he said these surgeons would not stop till they had taken out the heart or resected the medulla oblongata.

Ovariectomy results at King's College Hospital had been so disastrous that the governors had forbidden the staff to undertake it. Lister changed all this.

Slowly, very slowly, but surely, his work was winning its way to recognition. But even then, as his principles were being accepted, recognition was given grudgingly. One of his own colleagues, Prof. John Wood, said that Lister's fame came from Germany, and said that the "Germans were dirty people" but that this antiseptic system "was not really necessary in England." Efforts to depreciate him were made by saying that there was nothing in his methods except cleanliness, and late converts concealed their over-due repentance by rapturously embracing asepsis and vaunting its superiority over the "antiseptic system," as it was still called.

But all this was later. In these early years of Lister's advent a little personal recollection will illustrate how slowly his evangel spread, yet how courageously confident he was of his mission. I was standing beside him one day on the steps of the hospital in 1883 and waiting for his carriage to pull up, soon after the attack on him for daring to open a healthy knee joint. He began by quietly remarking that the day would surely come when the profession would accept the principles of his methods, "and," he added warmly, "if the profession does not recognize them, the public will learn of them and the law will insist on them." Then, in one of those serious, almost solemn, and always arresting little speeches, into which he occasionally and unexpectedly dropped, he placed his hand on my shoulder and added

3. Proceedings, London Medical Society, vii (1884), p. 8.



pathetically, "Thomson, I do not expect to see that day, but you may."

Within a decade from that day he had left King's College Hospital, but not before his mission had been fulfilled. We all know the story. Sir James Simpson, a colleague of Lister's in Edinburgh University, had made the assertion that "The man laid on the operating table in one of our surgical hospitals is exposed to more chances of death than the English soldier on the field of Waterloo."<sup>4</sup> Before the coming of Lister the death rate in major operations was from 25 to 40 per cent; in other words, the chances were that one out of every three or four patients would die. These figures included cases which were not necessarily serious on admission. Nowadays, the death rate is 2 to 3 per cent, and this is practically made up of cases in which the patient is admitted almost moribund, such as cases of advanced intestinal obstruction and of patients operated on *in extremis* with the faint hope of saving life.<sup>5</sup>

Dealing with the surgical revolution of the Victorian era, Treves writes: "It is a question if any change in human affairs, or any disturbance in human creeds, has ever been at once so striking, so thorough, and so unexpected as has been this stirring crisis of the healing art."<sup>6</sup>

Let us hearken to what one who was at no time his pupil said of Lister's work:

"Lister created anew the ancient art of healing; he made a reality of the hope which had for all time sustained the surgeon's endeavors; he removed the impenetrable cloud which had stood for centuries between great principles and successful practice; and he rendered possible a treatment which had hitherto been but the vision of the dreamer. The nature of his discovery—like that of most great movements—was splendid in its simplicity and magnificent in its littleness. To the surgeon's craft it was but 'the one thing needful.' With it came the promise of a wondrous future; without it was the hopelessness of an impotent past." (Treves.)

In 1892 Lister delivered his last lecture as he had to retire under the age limit of sixty-five, but he was invited by the council to continue his wards for another year and finally left King's College Hospital at the end of the summer session of 1893.

In 1897, the year of Queen Victoria's second jubilee, he was made a peer on New Year's Day, his peerage having been the first ever conferred upon a surgeon. In the following May an address and a dinner were offered to him by his old pupils, and I had the honor of being the secretary of that festival. No less than thirty old house surgeons and one hundred dressers were gathered together, some of them having come from the far

ends of the earth. Many have told me that they have never seen such a manifestation of personal esteem and admiration as on that night when Lister's health was drunk with Highland honors. I took the opportunity of reminding the chief of his words to me on the steps of the hospital fourteen years previously, and I pointed out that he had not been imprisoned like Galileo, burnt at the stake like Giordano Bruno, or crucified like other pioneers of truth, but that we had both lived to see the day when his principles were universally accepted. Then, drawing a newspaper of the day from my pocket, I called his attention to the fact that the other part of his prognostication had been fulfilled, for this paper recorded the fact that a midwife in Germany had been sent to prison for manslaughter, as she had attended a confinement without providing herself with a proper antiseptic outfit!

In proposing Lister's health at a Royal Society dinner, Mr. Bayard, the American ambassador, exclaimed, "My Lord, it is not a profession, it is not a nation, it is humanity itself which, with uncovered head, salutes you."

What was the personality of this master of surgery? He was tall, well built, deep chested. He had a profusion of thick iron-grey hair, worn somewhat long; except for small side whiskers, he was clean shaven. I never saw him in any other pattern of collar or necktie except those seen in all his portraits. You will observe that the upright collar has the peaks turned down over a black silk bow tie. This was his one and only form of what the haberdasher calls "neckwear." His costume never varied; it was always a greyish pair of trousers and a frock coat made of the shiny black material called broadcloth, and nowadays seen only on undertakers and country hotel waiters. His hands were large and neither graceful nor delicate looking, yet he was a steady, firm, and deliberate operator. With the least exertion he perspired freely, and it was always one nurse's duty to stand behind him ready armed with a clean towel, to which he frequently turned during an operation to mop his streaming forehead. His voice was low and musical, with a rather attractive hollowness about it and with an occasional slight stammer. His manner was generally serious, but relieved by what Dr. John Stewart calls his "gentle, amused, and somewhat pensive smile." His manner to many had a certain aloofness about it and even his life-long disciple, Watson Cheyne, confesses that Lister always inspired him with a certain sense of awe. I myself always felt that his "soul was like a star, and dwelt apart." Yet he commanded not only veneration, respect, and admiration but a feeling of trust

4. The Works of Sir J. Y. Simpson, Edinburgh, Adam and Charles Black, 1871, ii, 289-392.

5. Cheyne, Sir William Watson, The Practitioner, lviii (June, 1897), p. 632.

6. Treves, F., The Practitioner, lviii (June, 1897), p. 632.

and devotion which could only be explained by the nobility and sincerity of his character. Though separated from him by the broad Atlantic for thirty-four years, a former pupil could write, "It is beyond my power to express the feelings of reverence and love I have for Lord Lister or to say how much his life has been to me." (John Stewart, 1912.) For my part, I can only say that no teacher, no friend, no man I have ever known has impressed me as Lister has done. To none of them do I feel the debt I owe to him for the example of his veracity of thought and word, his patience under persecution, his constancy in the pursuit of truth, his eagerness to instruct his pupils, his long-suffering with stupidity, his tenderness to the poor, and his gentleness to the sick and maimed. He was universally courteous and by treating others with respect, even his most violent critics, he appeared to be able to elicit the same consideration in return.

As an illustration of his devotion to the profession and the high esteem of which he considered it worthy, I will quote you a few sentences from an address he gave to the newly qualified students in a graduation address in 1878:

"If we had nothing but pecuniary rewards and worldly honors to look to, our profession would not be one to be desired. But in its practice you will find it to be attended with peculiar privileges, second to none in intense interest and rare pleasures. It is our proud office to tend the fleshly tabernacle of the immortal spirit, and our path, if rightly followed, will be guided by unfettered truth and love unfeigned. In the pursuit of this noble and holy calling I wish you all Godspeed."

When anything went wrong with a patient, and when a patient died, Lister was touchingly cast down and sorrowful. I remember an incident when he was working at the radical cure of hernia. Before his time, and particularly in King's College Hospital, efforts to effect this were attempted by a complicated method of subcutaneous wires. Well, Lister was going to try, probably for the first time in the world's history, the open method of a somewhat emphysematous subject. The twenty-four hours before the operation were very foggy. I went over the patient's chest carefully (having previously been house physician, I may remark); and, when Lister arrived, I reported that the man was very bronchitic and that he might like to defer the operation. After making some inquiries and hearing that the patient's pulse and temperature were normal, he decided to go on with it. The man died three days later from bronchitis and pulmonary edema. I do not, of course, quote this to emphasize my own perspicacity, but to illustrate how Lister acted under the circumstance. He selected as subject for his next lecture, "The medical care of surgi-

cal cases," narrated the history of the bronchitic man, and his deep grief that he had not paid more attention to the warning of his house surgeon. There are few professors who would have had such sincerity, courage, and magnanimity.

But his biographer relates that though he felt things very keenly at the time, a certain buoyancy soon restarted his equanimity and forward-looking temperament. He writes thus when on a holiday: "I have the happy faculty of being able to throw off all thoughts of work for the time being." Real idleness was not congenial to him. He fished, but as his biographer says, he was a diligent amateur but never an expert. His efforts at skating were more like a scientific pursuit, and he could do 8's and 3's, but of small dimensions. He took a fair share of vacation and, on his holidays, like all large-minded men I have met, he could be light-hearted and boyish, but complete idleness never appealed to him. On his holidays there were usually proofs to correct, or addresses to prepare; on the Continent, he practised and improved his very good French and German; during winter visits to Spain between 1887 and 1889, he acquired a certain amount of Spanish: he was devoted to walking and excursions; he was interested in botany and birdlife; and he could always fall back on a pocket-volume of Horace, Dante, or Goethe.

Another trait of his character was his invariable gentleness and sympathy with the humblest or roughest of his hospital patients. He seldom referred to a patient as "a case," but introduced his remarks with such kindly terms as "this poor fellow," or "this good woman," or "this little chap." A letter written by Lister to the house surgeon who preceded me, Dr. R. G. Lynam, now of Oxford shows this trait. The letter is entirely concerned with the interests of his students and a hospital patient, for whom he shows a touching consideration. He sent the letter to the hospital by special messenger, there being no telephone in those days. In reading his *ipsissima verba*, you will not "see Lister plain," but you will come into very close contact with his noble character. It reads as follows:

"My dear Lynam:

"I shall not be able to be at the hospital till three to-day. Will you, therefore, please have notices put up in college and hospital to the effect that I am not able to meet my class today, and also, if the empyema patient has telegraphed that he will be at the hospital today, will you please telegraph again to him putting him off till Wednesday, so as to avoid his exposing himself in vain this cold day?

"Yours very truly,

"JOSEPH LISTER."

We are fortunate in possessing a perfect pen picture of the master in imperishable verse writ-



ten by W. E. Henley, who was at one time his patient in the Edinburgh Infirmary:

"His brow spreads large and placid, and his eye  
Is deep and bright, with steady looks that still,  
Soft lines of tranquil thought his face fulfill—  
His face at once benign and proud and shy.  
If envy scout, if ignorance deny,  
His faultless patience, his unyielding will,  
Beautiful gentleness, and splendid skill,  
Innumerable gratitudes reply.  
His wise, rare smile is sweet with certainties,  
And seems in all his patients to compel  
Such love and faith as failure cannot quell."

Lister lived most of his life and died a member of the Church of England, but he was brought up as Quaker and it has been well said of him that he belonged to a society the members of which called all men "Friend." (Sir Michael Foster.)

Lister was blessed with a loving and devoted wife. She was the daughter of Professor Syme, whom he had served as house surgeon in Edinburgh, and she appeared to have no other thought or interest beyond her husband. She not only loved and shielded him in every way, but entered intelligently into all his work and researches; helped him in his studies; worked in his laboratory; wrote his letters; and often, when I arrived at his house early in the morning, to go with him to a private operation, I would find Mrs. Lister preparing and checking off his instruments. In their pleasures, as in their work, they were united. They were inseparable companions on all his holidays, and in the numerous continental trips he loved to make. It was while on one of these in Italy that his wife died, after a very brief illness, at Rapollo, in 1893. They had no children, and after his wife's death Lister was a very lonely man.

His last years were saddened by slowly failing health. On February 10, 1912, he died at Walmer, a little fishing village on the English Channel, which looks across the Goodwin Sands to the shores of France.

He would have been buried at Westminster Abbey had he not left clear instructions that he wished to be laid to rest beside his wife in West Hampstead Cemetery. Before this took place, a public funeral service was held at Westminster Abbey on February 16, 1912, and the pallbearers were representatives of the Order of Merit, the Royal Society, the Royal College of Surgeons, the Universities of London, Edinburgh, and Glasgow, the Lister Institute, and King's College Hospital, which was represented by his first house surgeon and faithful disciple, Sir Watson Cheyne.

In the north transept of Westminster Abbey there is a marble medallion of Lister's bust, placed near to those of the great scientists Darwin, Stokes, Anderson, and Watt. It is extraordinarily like "the chief," as his students called him in Edinburgh.

Those who attended the impressive requiem in the Abbey will never forget the stately pomp and circumstance of a public funeral service, when not only the nation's representatives but delegates from all the world over manifested their mourning for a man who had made humanity his debtor for evermore.

"When the ear heard him, then it blessed him, and when the eye saw him it gave witness of him; he delivered the poor that cried, the fatherless, and him that had no one to help him. Kindness, meekness, and comfort were on his tongue. If there was any virtue, and if there was any praise, he thought on those things. His body is buried in peace, but his name liveth forevermore."

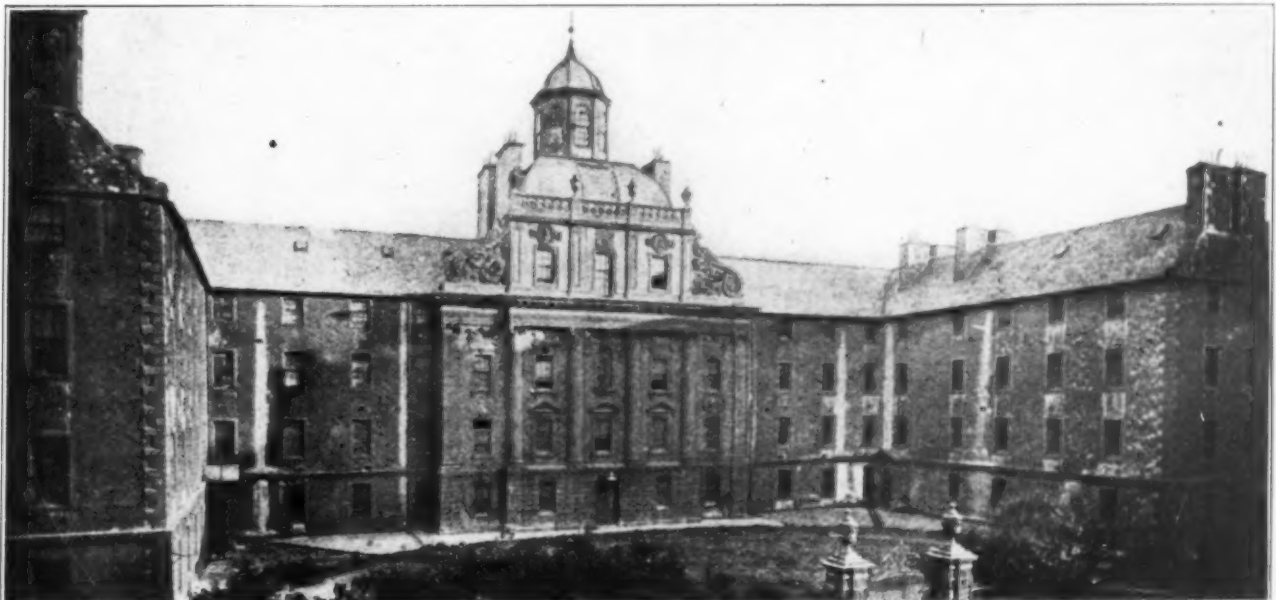


Fig. 2. Edinburgh infirmary, where much of Lister's great work was done.

## ASEPTIC NURSING IN AMERICAN HOSPITALS\*

**Aseptic Nursing Successful Here as Abroad—Least Efficient in the Case of Measles and Chicken Pox—Contagious Disease Wards Necessary in Every General Hospital**

BY D. L. RICHARDSON, M.D., SUPERINTENDENT, PROVIDENCE CITY HOSPITAL, PROVIDENCE, R. I.

**A** SEPTIC nursing was first introduced into America at the Providence City Hospital in 1910. This hospital was completed at that time for the treatment of contagious diseases. The



Fig. 1. Providence City Hospital, Providence, R. I., where aseptic nursing was first introduced into America in 1910.

planning of the hospital with the idea of employing medical asepsis was the work of Dr. C. V. Chapin. He had observed its use in both France and England and was convinced of its feasibility.

Patients suffering from infectious diseases are admitted to three buildings of two stories each. Two of the buildings are identical. There is a ward on each floor and there are separate rooms, containing from one to three beds, for about fifteen patients, and a convalescent room for from twelve to fourteen more. The first floor of one building is reserved for scarlet fever and the same floor of the other building for diphtheria. The second floors are isolation wards. The first floor of the third building consists of single rooms, patterned somewhat after the Pasteur Hospital. The second floor consists of rooms for from one to three patients each.

Since the opening of the hospital, patients have been accepted on the physician's diagnosis, and after a few days, any of them who are found not to be suffering from a contagious disease are sent home. There has been no selection of patients. The nursing has been done by pupils under a graduate head nurse, except in isolation wards E and F. In these wards, we have tried to keep a graduate force but this has not always been possible, and the most trusted pupils have been employed. The reason for this extra precaution is that into these wards have been admitted, as

far as possible, measles, chicken pox, and small-pox during the early stage of the diseases at least. It is with measles and chicken pox that we have had two-thirds of all cross-infections.

The separate, or box-room, and the barrier, or bed-isolation, systems have been employed. We have not intended to treat measles and chicken pox in the early period of the diseases by the bed-isolation system. They are cared for in separate rooms.

During the last nine years, up to January 1, 1919, the following diseases have been treated in the hospital. This excludes 799 cases of advanced tuberculosis which have been treated in a fourth building; among whom there has never been a cross-infection. The report is based on 11,074 cases, suffering from the following diseases: Cerebrospinal meningitis, 11 cases; chicken pox, 111; diphtheria, 2,586; diphtheria with other infectious diseases, 111; diphtheria carrier, 87; erysipelas, 68; gonorrheal ophthalmia, 7; gonorrhea in other forms, 15; gonorrheal urethritis, 14; gonorrhea vaginal, 57; influenza, 308; influenza with other infectious diseases, 7; influenza with pneumonia, 49; laryngitis with negative cultures, 6; measles, 870; measles with laryngeal diphtheria, 9; measles with other infectious diseases, 112; epidemic meningitis, 17; mumps, 59; mumps with other infectious diseases, 2; no diagnosis,



Fig. 2. Isolation ward E of the Providence City Hospital, where careful aseptic nursing has resulted in a low rate of cross-infection.

62; no disease, 119; noma, 3; other diseases, 533; pneumonia, all forms, 11; acute poliomyelitis, 82; poliomyelitis with other infectious diseases, 3; rubella, 145; rubella with other infectious diseases, 6; scarlet fever, 2,141; scarlet fever with diphtheria, 7; scarlet fever with other infectious

\*This is the third article in a series on the care of infectious diseases in hospitals. "The Care of Infectious Diseases in Hospitals" appeared in the April issue of THE MODERN HOSPITAL, and "Medical Asepsis in French and English Hospitals" in May; the fourth, on the construction of infectious disease hospitals, will follow.



diseases, 159; septic sore throat, 8; congenital syphilis, 22; syphilis of the nervous system, 82; tonsillitis, 341; trachoma, 6; other forms of tuberculosis, 4; tuberculous meningitis, 20; typhoid fever, 6; typhus fever, 4; variola, 26; Vincent's

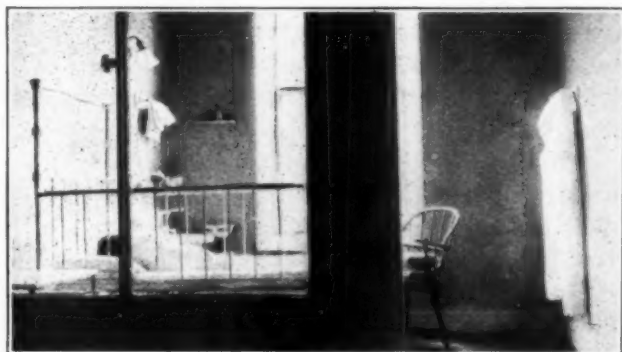


Fig. 3. Room in isolation ward E. Both the box-room and bed-isolation systems are employed, and measles and chicken pox in the early stages are always cared for in separate rooms.

infection, 17; whooping cough, 298; whooping cough with other infectious diseases, 4, making a total of 11,074.

All the smallpox patients, except five, were treated in a separate building in another part of the city. This smallpox hospital was abolished in 1914.

Among these 11,074 patients, 234 cases of cross-infection occurred as follows: chicken pox, 95 cases; measles, 67; scarlet fever, 34; diphtheria, 10; rubella, 11; whooping cough, 8; influenza, 5, and mumps, 4 cases, making a total of 234. This is a cross-infection rate of 2.1 per cent.

It will be noted that of the 234 diseases contracted in the hospital, 162 or two-thirds, were of measles and chicken pox.

These figures include absolutely every case of disease contracted in the hospital, whether due to faulty technique or to infection which took place in a convalescent ward where one patient might infect several others before he could be removed. This latter event has occurred many times in the case of chicken pox and measles. In fact, nearly every one of such initial infecting cases has entered the hospital in the incubation period.

It is interesting to study cross-infection among patients in ward E, which is composed of single-bed rooms, and to which every kind of contagious disease has been admitted, at any stage, as well as cases for observation. This history covers a period of four years, during which a very careful record was kept of the number of patients and the number of transmissible diseases which they had in an infectious state while in this ward.

During this period, 753 patients were treated in this ward; of this number 72 were non-infec-

tious. The remainder of the patients may be classified as follows, some patients having more than one disease: chicken pox, 94 cases; diphtheria, 131; diphtheria carriers, 69; erysipelas, 5; gonorrhea (all forms), 14; impetigo, 5; influenza, 4; measles, 234; mumps, 15; noma, 8; rubella, 30; scarlet fever, 144; scabies, 2; syphilis, 6; tonsillitis, 55; tuberculosis, 18; typhoid, 4; typhus, 3; variola, 4; Vincent's angina, 5; and whooping cough, 62, making a total of 912.

Among these 753 patients, the following cross-infections developed: chicken pox, 18 cases; diphtheria, 1; measles, 6; mumps, 2; scarlet fever, 4, making a total of 31. This is a cross-infection rate of 4 per cent. Again it will be noted that over two-thirds were of chicken pox and measles.

A contagious pavilion was opened August 9, 1914, in connection with the University Hospital at the University of Michigan. Dr. Reuben Peterson, medical director of the hospital, was responsible for the construction of the pavilion and the introduction of aseptic nursing. He had three aims in view: to have a place where contagious cases could be taken from the general wards of the hospital to save long periods of quarantine; to take in students and members of the city suffering from contagious diseases; and to afford material for teaching purposes.

The pavilion is a one-story building with twelve rooms, 12 by 16 feet in size, each containing two beds. These rooms open upon a central corridor and also upon a 10-foot covered veranda which surrounds the building. Each room has a lavatory, the water being turned on by a knee lever, and the ward is furnished with utility rooms and equipment for sterilization of dishes, etc.

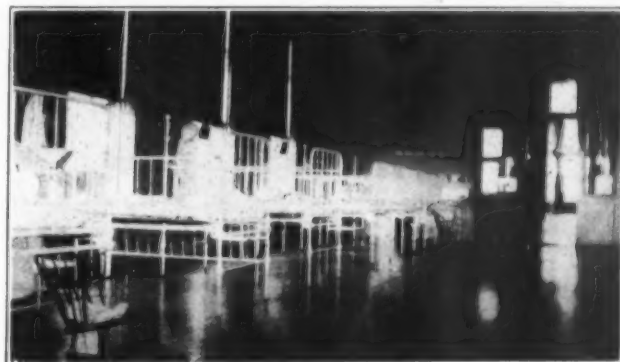


Fig. 4. Ward D, Providence City Hospital, where the bed-isolation system is employed. The card on the bed indicates the unit to which the patient belongs.

To Dr. David Cowie, I am indebted for the following data:

During three years and nine months, there have been treated in this ward 1,043 patients who suffered from the following diseases: diphtheria,

183 cases; diphtheria carriers, 88; erysipelas, 67; impetigo contagiosa, 11; influenza, 121; influenza and pneumonia, 38; infantile paralysis, 6; measles, 27; meningitis, 1; 168 cases for observation; parotitis, 37; pemphigus, 1; pertussis, 3; rubella, 38; scarlet fever, 122; smallpox, 47; varicella, 85, making a total of 1,043.

Among these patients, 31 cross-infections developed, as follows: diphtheria, 2 cases; diphtheria carriers, 5; erysipelas, 1; measles, 5; pertussis, 1; scarlet fever, 1; and varicella, 16, making a total of 31.

This is a cross-infection rate of 2.7 percent.

The contagious department of the Rochester General Hospital, Rochester, N. Y., has used aseptic nursing for four years, accepting all kinds of infectious diseases. During this time, 637 patients have been treated in this department.

The following cross-infections have developed: measles, 5 cases; scarlet fever, 2, making a total of 7.

This is a cross-infection rate of 1.1 per cent.

For the above data, I am indebted to Miss Mary L. Keith, superintendent of the Rochester General Hospital.

Four years ago the Mitchell Memorial Hospital of New London in their contagious ward adopted aseptic nursing.

During the last four years, 390 patients have been treated, and were ill with the following diseases: diphtheria, 155 cases; scarlet fever, 87; measles, 24; rubella, 8; tonsillitis, 10; smallpox, 22; miscellaneous, 5; erysipelas, 6; mumps, 20; whooping cough, 10; cerebrospinal meningitis, 14; infantile paralysis, 28; and chicken pox, 1, making a total of 390.



Fig. 5. Central corridor of the contagious pavilion of the University Hospital of the University of Michigan. The patients in the rooms opening on this corridor are as free from the danger of infection as those in a general hospital.

Among these patients there has been only one cross-infection, and that was smallpox. The smallpox patient, who was the source of this case, was unruly and went into the infected patient's room. During this same period, there have been

only two cases of measles and two cases of diphtheria among the nursing force.

For this information, I am indebted to Dr. Ross E. Black of New London.

At the contagious ward of the St. Louis Children's Hospital, St. Louis, aseptic nursing has been used for some time. During a period from November 30, 1918, to April 1, 1919, the following diseases have been admitted: influenza, 99 cases; diphtheria, 78; scarlet fever, 28; measles, 2; tonsillitis, 8; epidemic meningitis, 1; pertussis, 2; miscellaneous, 5 cases, making a total of 223.

The following cross-infections have developed: scarlet fever, 1 case; diphtheria, 2 cases, and influenza, 1 case, making a total of 4.

This is a cross-infection rate of 1.8 percent.

Experience with aseptic nursing began at the Hartford Isolation Hospital July, 1914. Since that time, 2,202 patients have been admitted and among them 31 cross-infections have occurred, as follows: measles, 18 cases; chicken pox, 9; scarlet fever, 4, making a total of 31.

This is a cross-infection rate of 1.4 percent.

From a report by Dr. J. G. Wilson, of the Public Health Service, upon five years' experience at the hospital for immigrants at Ellis Island, is taken the following information:

During the period reported on, only eight wards have been used for contagious diseases. Two wards have been partitioned into rooms, containing from three to five cribs. In 1915, another ward was divided into one-bed units. In addition, in all other wards there is one room for isolation purposes. Each unit has a lavatory supplied with hot and cold water. The doors open into the room and are staggered, and each is supplied with a large glass window. There is also a window in the wall between rooms.

When children are out of bed, they are kept in the room by a removable gate. Each unit has the necessary equipment and furniture. All utensils and dishes are put in a creosote disinfecting solution before leaving the room.

In all, there are thirty-four units, each containing from one to five patients. The other wards are large and have accommodations for from fifteen to twenty-eight patients, depending on whether they are adults or children.

Practically all immigrants who are sick or suspected of being sick, are first admitted to the isolation room. This is necessary, for there is no way of knowing to what other diseases they have been exposed. The patients are admitted to the three isolation wards without discrimination as to disease. The nursing personnel is strictly trained in aseptic nursing.



During the five years reported on, 4,246 patients were admitted to the contagious wards. Of this number, 1,219 were either non-sick relatives or individuals who were either suspected of having a contagious disease or were contacts.

Out of this, 99 contracted a second disease, 83 of whom certainly contracted it in the hospital. To the number of certain cases were added 16 out of 31 cases, of which there was doubt as to whether they were contracted in the hospital or not. The 83 cross-infections were divided as follows: scarlet fever, 22 cases; diphtheria, 21; measles, 19; whooping cough, 14; rubella, 4; chicken pox, 2; mumps, 1, making a total of 83.

The cross-infection rate for the five years was 2.3 per cent. During 1915 and 1916 of this period, after more isolation units had been added, among 1,358 patients treated, only 19 contracted a second disease, a cross-infection rate of 1.4 per cent.

There are many other contagious hospitals in the United States and Canada where medical asepsis is employed with success. Among these are Evanston Hospital, Evanston, Ill., and St. Luke's Hospital, Jacksonville, Fla. I have been in touch with these hospitals and know that the cross-infection rate is low, although I have not been able to obtain exact data for this paper.

Considerable data has been presented to substantiate the practicability of medical asepsis, and all of it has been carefully tabulated from personal and printed reports, from the numerous hospitals referred to.

The conclusions to be drawn from these practical results are obvious. While aerial transmission of infection is not denied, it is of so little importance that all attention should be centered upon surgical cleanliness. It would seem as though measles and chicken pox might be exceptions, but of this one can not be too sure. The "infecting period" of these diseases is of very short duration, during the first few days of the disease, and it is not at all impossible that the means usually employed in hand-cleansing are not sufficient to free the hands from all infection. The transmission of these diseases has been very carefully studied in our isolation ward E. A patient in the room opposite to the infecting case was no more likely to contract the disease than one at the extreme end of the ward, perhaps on the same side of the corridor or in a room off the entrance hall.

Perhaps the most important result of being able to treat in the same ward or same building different infectious diseases is that it brings it within the financial means of small cities and

towns to maintain a contagious ward or wards. Such communities could not possibly build and maintain a separate building or wards for the different diseases.

It also makes it possible to treat any kind of



Fig. 6. Isolation room in the contagious pavilion of the University Hospital of the University of Michigan.

infectious disease and not limit admission to scarlet fever, diphtheria, and possibly measles.

It also makes evident the safety of conducting contagious wards in connection with general hospitals where can be treated not only contagious diseases in the community, but also the many frank or suspected cases which develop in every general hospital. In fact, it is a very necessary addition to every general hospital of any size.

#### HOME INSTITUTIONS SELECTED

##### Training in Home State Colleges or Industrial Shops When Practicable, the Best Way, Says the Federal Board

The Federal Board for Vocational Education is training men in four lines of work, generally speaking, namely: Agriculture, industry, commerce, and the professions. The belief of the board, which it endeavors to live up to, is that disabled men should go back to their own states for their training, if possible. The board is using private commercial colleges for the commercial education of disabled men, because they are accustomed to dealing with individual students, with different degrees of education, who enter the course at irregular intervals. Land grant colleges are being used for agricultural training and, whenever practical, for engineering courses as well. Industrial trade schools and shops and plants of all kinds in many places are being used for the industrial work. The idea of the board is to keep the men contented during their period of training, and, as a rule, this is best accomplished by placing the men near their own people, and among familiar surroundings.

Approximately 110 soldiers of the Canadian forces are now on record as having been blinded at the front or having suffered loss of vision to an extent that prohibits their return to former occupations.

## MATERNITY PAVILION AT SANTA BARBARA

## Cottage Hospital Equips Building With Many New Features—Glassed-In Nursery for Babies in the Center of the Ward

BY WINSOR SOULE, ARCHITECT, M. A. I. A., DIRECTOR COTTAGE HOSPITAL, SANTA BARBARA, CAL.

**T**HE Cottage Hospital of Santa Barbara, Cal., has recently finished the construction of a new eighteen-bed maternity pavilion, the erection of which was made possible through the kindness of four of its directors. The pavilion is planned to take entire care of the maternity work of this institution, and is on the same level as the first floor of the main building, connected with it by a glassed-in corridor.

The building contains a modern, up-to-date delivery suite, consisting of preparation room with an adjoining bath, delivery room, and sterilizing room. The delivery room is accessible only through the preparation room or the sterilizing room, and is entirely isolated from the main corridor of the building; the walls of this suite are scientifically soundproofed by the latest and most approved methods.

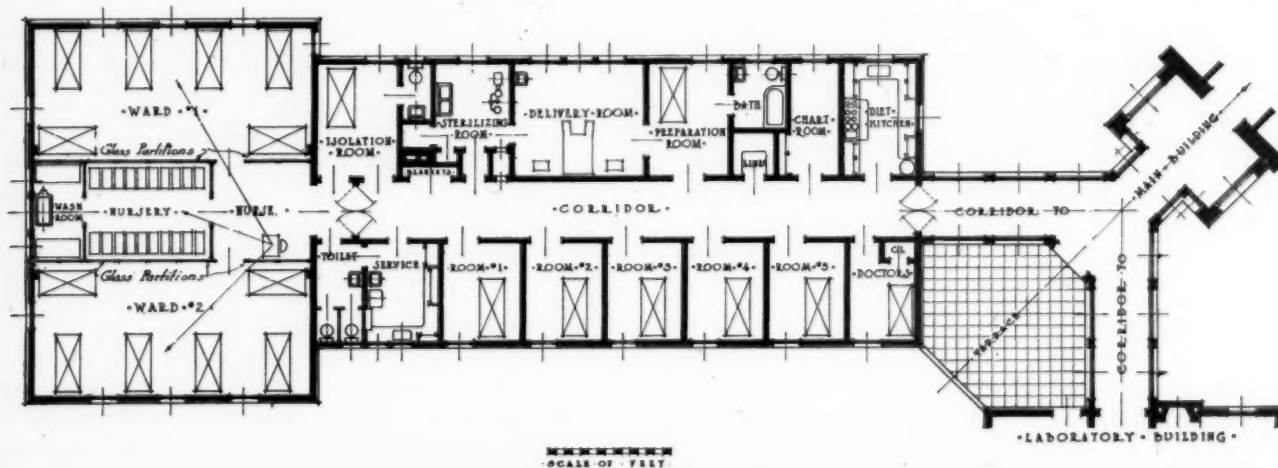
Five private rooms of moderate size are provided on the south side of the pavilion, as well as an extra room where the doctors may sleep while waiting for cases. A commodious service room is placed centrally in the building and the general toilet is located next to this. Near the wards is an isolation room which is provided with its own toilet accommodations. This room will care for infected cases and those requiring special seclusion, and is reached either from the main corridor or from the wards.

The special feature of this pavilion is the arrangement of the wards and nursery. These rooms occupy a space approximately 35 by 45 feet, and the separate divisions consisting of wards 1 and 2, nurses' station, nursery and washroom, are divided from each other by partitions

of clear glass which run from the floor to the ceiling, so that every portion of the building is visible at one time. The nursery, with its accommodations for twenty cribs, is placed in the center of the building between the two wards so that at all times, night or day, the babies are clearly visible to the mothers.

The washroom is likewise placed in the center at the end of the nursery, in such a way that every operation in the washing of the babies may be seen by the mothers in the adjoining wards. This provides a method of educating the mothers in the care of the babies which is invaluable in the case of ward patients. The partitions around the nursery are of double construction so that the crying of the babies is somewhat muffled in the wards, although no attempt has been made to cut off this sound entirely, as it is a part of the education of the mothers to learn that the baby must not be fed every time it cries.

The theory upon which this system is based was suggested by Dr. Alfred Baker Spalding of the Lane Hospital in San Francisco. Dr. Spalding in his extended maternity work evolved the theory that mothers would be more restful if they might see their babies at all times. He therefore partitioned off a corner of his maternity ward at the Lane Hospital and placed the babies in this enclosure. This proved so successful that he strongly recommended that the Cottage Hospital adopt this method of ward arrangement. Working on this hypothesis, with Dr. Benjamin Bakewell, obstetrician, I evolved the scheme of placing the glass nursery directly in the center between the two wards so that all mothers would have



Floor plan of the maternity pavilion of the Santa Barbara Cottage Hospital



their backs to the light and their faces toward the babies.

A special feature of this arrangement is the fact that friends and relatives may see the babies and the mothers from the nurses' station without disturbing either, and may often thus be prevented from entering the wards and the nursery. This arrangement also saves much handling of the babies in showing them to relatives.

The nurse from her station has control of the entire twelve beds and twenty cribs in the nursery and may keep all mothers and babies under observation at one time. The glass between the

nursery and the nurses' station is of single thickness only, so that any undue amount of noise in the nursery may attract her attention.

The chart room is located next to the delivery suite and the diet kitchen is placed in the corner nearest the main building, as the food for patients is prepared in the main kitchen, delivered to the pavilion in a food cart, and kept hot on a steam table until served to the patients.

The building is of fireproof construction, equipped throughout in the most modern fashion, and should prove a great asset to the work of this up-to-date institution.

## DUTIES AND RESPONSIBILITIES OF THE BOARD OF TRUSTEES

### **Their Position Analogous to a Board of Directors in a Commercial Concern—Cooperation With Staff and Superintendents the One Means of Success—A Method of Filling Vacancies in the Staff**

BY ALBERT H. FREIBERG, M.D., CINCINNATI

IN discussing the functions of a board of trustees to the hospital, it must at once be realized that the very existence of such a body might well be considered ground for a difference of opinion. There are hospitals and hospitals, and there is the greatest possible variation in their fields of activity; this is true in still greater measure, however, with respect to the manner in which they derive their support and therefore with regard to those to whom they are responsible. It must surely be regarded as axiomatic in the beginning of such a discussion as this, that every hospital is to be looked upon as a collective enterprise established by a community, or a part of such, for the purpose of extending aid to the wounded or diseased who can not receive such aid as they require as efficiently without it. The need for the hospital may lie in the indigence of those whom it is intended to benefit, in which case we are dealing with the hospital as a charitable institution; on the other hand the hospital may be founded by persons of means in response to the accepted need for such institutions in the treatment of certain conditions of disease and injury, in order that medicine and surgery may be enabled to do the best which is possible, recognizing that only in a modern hospital properly equipped and efficiently conducted can this be done. There are, in addition, those institutions in which we find a combination of these conditions in degrees widely varying.

In any case, it seems to me that the board of trustees is to be looked upon as a means of ac-

counting for a stewardship entrusted to them by a larger body; it is a reducing mechanism by which an ownership which is numerous and perhaps widely distributed seeks to provide for the efficient conduct of its business. In this respect there would seem to be no essential difference between the hospital and such large business enterprises as require specialized professional personnel for their successful operation. That such enterprises have financial gain as their final object does not militate against the comparison. The way to this result is the successful activity of the professional personnel; this is indispensable for the achievement of a production which is satisfactory not simply as to cost but equally as to quality and thereby as to marketability. The board of trustees is to be looked upon, therefore, as comparable to the board of directors of a manufacturing company whose output depends upon the work of men who are trained professionally; such a board proceeds to its task by the selection of a manager or superintendent. The superintendent will be chosen because of his training both professionally and as a manager, and his responsibility is twofold; to the board for the general results of the enterprise as a producer, and to his own professional staff for providing the equipment and conditions which are necessary to enable them to operate with efficiency.

The functions of the board of trustees would therefore appear to consist of the selection of an efficient superintendent, of the determination of

the general policy of the institution in order that it may, as a whole, have its proper relationship to those who are maintaining it; it should be incumbent upon them to produce the working capital or operating income and they should satisfy themselves through their superintendent and by personal observation that the institution is serving its defined purposes, that it is being conducted with the necessary economy and efficiency. Their activities with regard to the institution should be always through the intermediary of the superintendent; he should constitute their executive officer and should be clothed with sufficient authority to make him the master of the situation subject to rules and regulations carefully framed to meet the needs of the institution and the conditions under which it is being conducted.

Of very great interest to the physician and surgeon are two questions which arise in any discussion of the character and functions of a hospital board of trustees: 1. Should the medical profession be represented in the membership of such a board? 2. What should be the relations of the medical staff to the board?

The first question has arisen repeatedly in the conduct of hospitals because of difficulties which have been encountered and which, because of their technical nature or because they involved an intimate knowledge of the professional attainments of medical men seemed to invite the aid of members of the profession for their solution. For this reason it seemed wise to some that a hospital board should include one or more members of the medical profession in their number. The plan has often been tried and it cannot be said that experience must be made to argue in its favor.

The professional member or members being themselves at the same time members of the medical staff, there arises first of all an anomalous disturbance in the relationship of the employer and the employee; in the interest of discipline it is obviously undesirable for one to occupy both capacities. It is not to be assumed that one will himself be less in need of discipline or more likely to apply himself unfailingly to the discharge of his professional duty because he is one of the governing body. On the other hand, there is very likely to be a feeling of irritation on the part of the staff members who are not in this position, as they may feel that their colleague has an unfair advantage over them in being able to advocate any plan in which he has a personal interest; experience has, moreover, shown that this objection is by no means based on hypothetical grounds.

Membership in the board on the part of medical men who are not of the staff of the hospital is perhaps even more objectionable. Instances are

not wanting in which such positions have been sought for the purpose of unfriendly partisanship toward one or more members of the staff, or for the purpose of advancing the personal interest of one or more who are members of the staff, or, of those who, not being members, would very much like to be.

In any case, membership of a physician in such a board is likely to involve the unpleasant and undesirable necessity of being looked to by his fellow members as a judge of the professional conduct of a colleague; this is a situation which had best be avoided. At the same time there can be no doubt that it will be frequently desirable or even necessary for the board to have the advice and assistance of one professionally trained and experienced. Should the superintendent be a physician, as he should be, such aid may be secured from him. On the other hand, the superintendent himself may be the subject of inquiry. Furthermore, it is surely of advantage that the sentiment of the staff should be always taken into account in shaping the policy of the institution; it is to be assumed that they are vitally interested in its welfare and successful conduct.

The solution of the difficulty would seem to lie in the definite organization of the staff as a body with stated times for meeting; it should be incumbent upon them to select one of their number as a delegate who should have the right and the duty to attend the regular meetings of the board. He should in this capacity have the rights of a board member with the exception of the right to vote, and should come to the board meetings instructed by the staff and thus enabled to speak for them. In this manner there may be provided such coordination of the activities of the two bodies as would insure the most effective and harmonious cooperation between them.

There remains to be discussed the relationship which should exist between the medical staff of a hospital and its board of trustees in respect to the appointment of members of the medical staff. It is obviously not suitable that the medical staff should be a self-perpetuating body. It is so generally conceded, and this is so undesirable that it is unnecessary to discuss the reasons therefor. We cannot do better than to abide by our simile, the board of trustees being likened to a board of directors. The power to employ or discharge must finally reside in them. They cannot, however, be capable judges of men's professional attainments; neither are they in position always to determine how men can work together agreeably. This knowledge is necessary, however, if there is to be developed that *esprit de corps* which is so greatly to be desired in a hospital staff. We have



here another difficulty which disappears when the staff and the board come together in a spirit of co-operation, each striving to do that which will be most acceptable to the other as well as most advantageous to the institution. It is inconceivable that the one thing can be accomplished without the other. Real success in hospital management implies that both should be accomplished. When staff appointments originate among laymen, influences come into play and precedents are created which are most troublesome and whose effect is unfavorably cumulative as years go on. Staff appointments should therefore originate in the staff by means of a mechanism definitely provided for. The following is suggested as a method which not only responds to the needs in a theoretical way but which has stood the test of trial. When a vacancy exists it is to be filled by the board of trustees from nominations presented by the medical staff. This should be true of all positions, both executive and subordinate, in the different

hospital services. The nomination, in order to be so considered, should be proposed by action of the medical staff in open meeting. As a part of the above procedure, the director or head of service should have the privilege of expressing his choice of men to the staff. This should, however, not preclude the possibility of other nominations and their discussion by all who are present. If the board of trustees are unwilling to appoint any man who has been nominated by the staff, it should be their privilege so to state and it would then devolve upon the staff to present other nominations. If the procedure which has been suggested were carefully followed, it is unlikely that this would occur with any degree of frequency; on the other hand it would provide for a method so open and obviously fair that in the long run the most useful men would be found receiving appointments. Perhaps perfection cannot be claimed for it. In this respect it simply shares the character of every human arrangement.

### RIVERSIDE SANATORIUM AT GRANITE FALLS, MINNESOTA

#### Maintained by Four Counties Under State Sanatorium Law—Includes Resident and Dispensary Service—Noteworthy for Beautiful Location and Practical Details of Construction

BY E. H. SUND AND A. B. DUNHAM, ARCHITECTS, MINNEAPOLIS, MINN., SARA W. DUNTON, SUPERINTENDENT RIVERSIDE SANATORIUM, AND ROBINSON BOSWORTH, M.D., EXECUTIVE SECRETARY OF THE STATE ADVISORY COMMISSION, ST. PAUL, MINN.

**T**HE Riverside Sanatorium of Granite Falls is one of the fourteen in Minnesota operating under the provisions of the law granting state aid for the construction of county sanatoriums. (Thirty-three counties have availed themselves of the opportunity to construct sanatoriums, either alone or by grouping with other counties. The Riverside Sanatorium is maintained by four counties—Yellow Medicine, Las Qui Parle, Renville, and Chippewa, in which the sanatorium is located. The funds for running the institution are derived from three sources; first, the largest and main portion is raised by a tax which is levied each year by the respective county commissioners, who can tax up to two mills on the dollar of taxable property; second, all resident patients of these counties who can afford it pay at the rate of \$7 a week, and all patients from other counties in the state pay \$10 a week; third, for all free patients the state allows the sanatorium commission \$5 a week.

Mrs. Sara W. Dunton, the superintendent, is a graduate of Roosevelt Hospital, New York City. In addition to her duties as superintendent, she acts as secretary of the sanatorium commission.

(This commission holds monthly meetings at the sanatorium to audit bills and act on any matters presented for its consideration. The staff contains four nurses; of these, one, a practical nurse, attends to the night duty; the day staff consists of a head nurse and two assistants, one of whom is a graduate and one a practical nurse.

The service rendered by this institution is of the highest type, both to its actual patients and to the counties which maintain it. The medical work is performed by experts in the diagnosis and treatment of tuberculosis. Their duties include the medical work at the institution and the establishment and maintenance of several rural dispensaries in the four counties. For a greater portion of the time since this institution was completed, one or more visiting nurses have been working through the community. By means of their efforts, special clinics have been held in many localities, and not a few unsuspected cases of tuberculosis have been discovered among children as well as adults. They also follow up and assist the cases discharged from the sanatorium from time to time.

The care given the patients of the sanatorium

is of the same high grade. Each patient receives a thorough physical examination on admission and every sixty days thereafter. Rounds are made twice daily by the doctor and the superintendent; nose and throat treatments are given nightly, and, at present, a class of sixteen are receiving tuberculin. The sanatorium is equipped to give pneumothorax treatment and to remove tonsils and adenoids. When ambulant patients

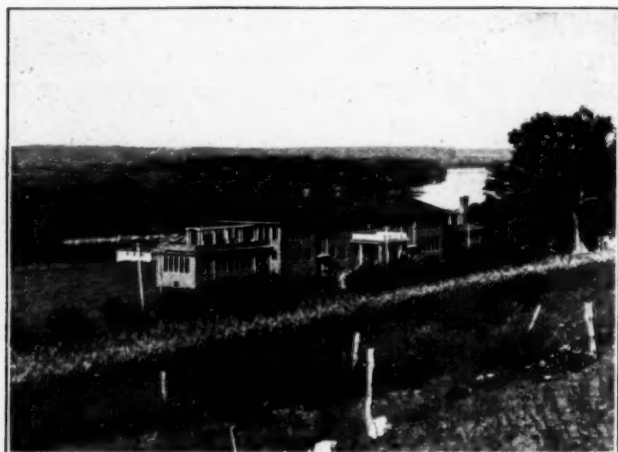


Fig. 1. Riverside Sanatorium, located on the Minnesota River at the foot of a slope which provides protection from the north wind in winter.

are in a condition to have graduated exercise, it is prescribed by the doctor and exercise charts are kept under the supervision of the nurses.

The sanatorium is located about two miles from the city of Granite Falls on the banks of the Minnesota River at a point which commands a good view of the surrounding country. Granite Falls was chosen as the location for the sanatorium because it affords the best railroad connections with all the counties in the district. The main county road runs through the entire property and almost parallel with the river. From this road down to the river, the land has a gradual slope, while on the other side of the road the ground rises abruptly and forms a ridge which protects the institution against the cold northerly winds in winter.

The site comprises thirty acres of land, of which the greater part is tillable. It is not the intention of the commission, however, to do any other farming than raising the necessary vegetables for the institution. In this it has been very successful, and the garden not only supplied the sanatorium with the daily consumption of vegetables but afforded large quantities which were canned for the winter's use. The water supply is taken from the river, but, as there were certain objectionable impurities in this water, it was found necessary to build a water purification and softening plant. Here the water is so thoroughly

cleaned and softened that the supply ranks among the best in Minnesota institutions.

The institution at present has only one large patients' building with accommodations for forty-eight patients. The administrative offices and service rooms are also located here. In addition, there is a nurses' home, power plant and laundry building, water filtration plant, garage and workshop, and barn and cottage for the engineer.

The exterior walls of all new buildings are faced with a brown brick laid with wide raked joints. The brick below the first-story window sills is of a slightly darker shade than that used for the rest of the building. A one and one-half inch projection of this part of the wall added to the darker color gives emphasis to this line and establishes it as the base of the building. The exterior woodwork with the exception of the sash is painted a dark cream. This in combination with the tan color of the roofs gives a very simple and harmonious color scheme that blends well with the surroundings.

The building faces south with a garden entrance to the recreation room on this side; the main or business entrance is on the north side. A porte-cochere protects this entrance.

The construction throughout is fireproof, except the roof, which is wood frame covered with wood shingles. To protect the patients against any danger from a possible fire in the roof, the concrete ceiling slab of the top story has been built heavy enough to carry the load in case the roof should burn and fall. This type of roof construction was adopted to save money.

The power plant and laundry is located about a hundred and fifty feet from the main building. The lower part of this building, which is taken up by the power plant, is fireproof and has a reinforced concrete slab overhead. The superstructure of the laundry, however, is not fireproof, for the ceiling is of frame construction. The exterior walls are faced with brick to match the main building. The chimney is of reinforced concrete construction and is eighty-five feet high.

The present building, including site, equipment,



Fig. 2. Southern exposure of the Riverside Sanatorium. The long meadow before it slopes down to meet the river.



and architect's fees, cost approximately \$115,000. The cost per cubic foot for constructing the main building and power plant, including plumbing, heating, and electric wiring was 21.3 cents.

There is a well-lighted and ventilated basement under the entire building which is plastered and has cement floors and base. Basement rooms under the service wing are used for storing kitchen supplies. A toilet room for the kitchen help, a fuel room for the kitchen and refrigerating plant are also located in this part of the basement.

Under the central portion of the building is located the sterilizer where all clothes for laundry as well as mattresses are sterilized. There are two rooms set apart for this work with the sterilizer extending through the partition separating them. The clothes are put into the sterilizer in one room, which is called the receiving room, and taken out in the other. In this way the sterilized clothes are kept from coming in contact with the infected.

The rest of the basement is taken up by storerooms, laboratory with dark room, morgue and autopsy room, trunk rooms, locker room for



Fig. 3. One of the patients' wards in the Riverside Sanatorium. The windows have three sashes so designed that they can be dropped into a pocket below the sill, turning the rooms into what are virtually porches.

patients' belongings that cannot be kept in their lockers on the upper floors, public toilets, and future cloak rooms to be used by patients coming to the dining room from the cottages when these are built.

As will be seen from the first-story plan, the general office is located on one side of the entrance lobby and the superintendent's or physician's office on the other, with a small examination room adjoining. On the west or administrative side are located also a combination head nurse's office and



Fig. 4. Interior view of the water purifying and softening plant of the Riverside Sanatorium. It is due to this plant that the water supply drawn from the river ranks among the best in Minnesota institutions.

drug room, one additional examination room, and a treatment room. A space is provided for an elevator, in case it should ever be found necessary to install one.

The portion of the first story located east of the main entrance is given up entirely to patients, except for the general office. A partition and door across the corridor separates this part of the floor from that already described. There are accommodations for nineteen patients, of whom ten are cared for in one large ward, six in a smaller ward, and the rest in private rooms. Here are also a diet kitchen equipped with refrigerator, cupboards, sink, sterilizer, and electric cooker; a utility room with a flushing rim porcelain slop sink, bed-pan flusher, and sterilizer; linen rooms; and a large patients' dressing room with lockers for all ward patients.

These two sides of the building are separated by the recreation room which is located directly opposite the entrance door. This is a large, well-lighted, cheerful room with a fireplace. Through the double pair of French doors connecting this room with the corridor, every person entering the institution must necessarily look directly into the well-furnished and cozy recreation room. The first impression of a visitor is therefore one of roominess and comfort. The room contains a piano and a victrola, and, on some of the holidays, entertainment is furnished here in the way of a card party, musicale, candy pull, or masquerade. The entire atmosphere of the place is made as homelike as possible.

The dining room is at the end of the main corridor and separated from it by large French doors. At each end of the room there is a group of five large windows. These, in addition to the windows on the west wall, give an abundance of light and air. A small room with two flushing rim cuspidors is located next to the dining room.

## THE MODERN HOSPITAL

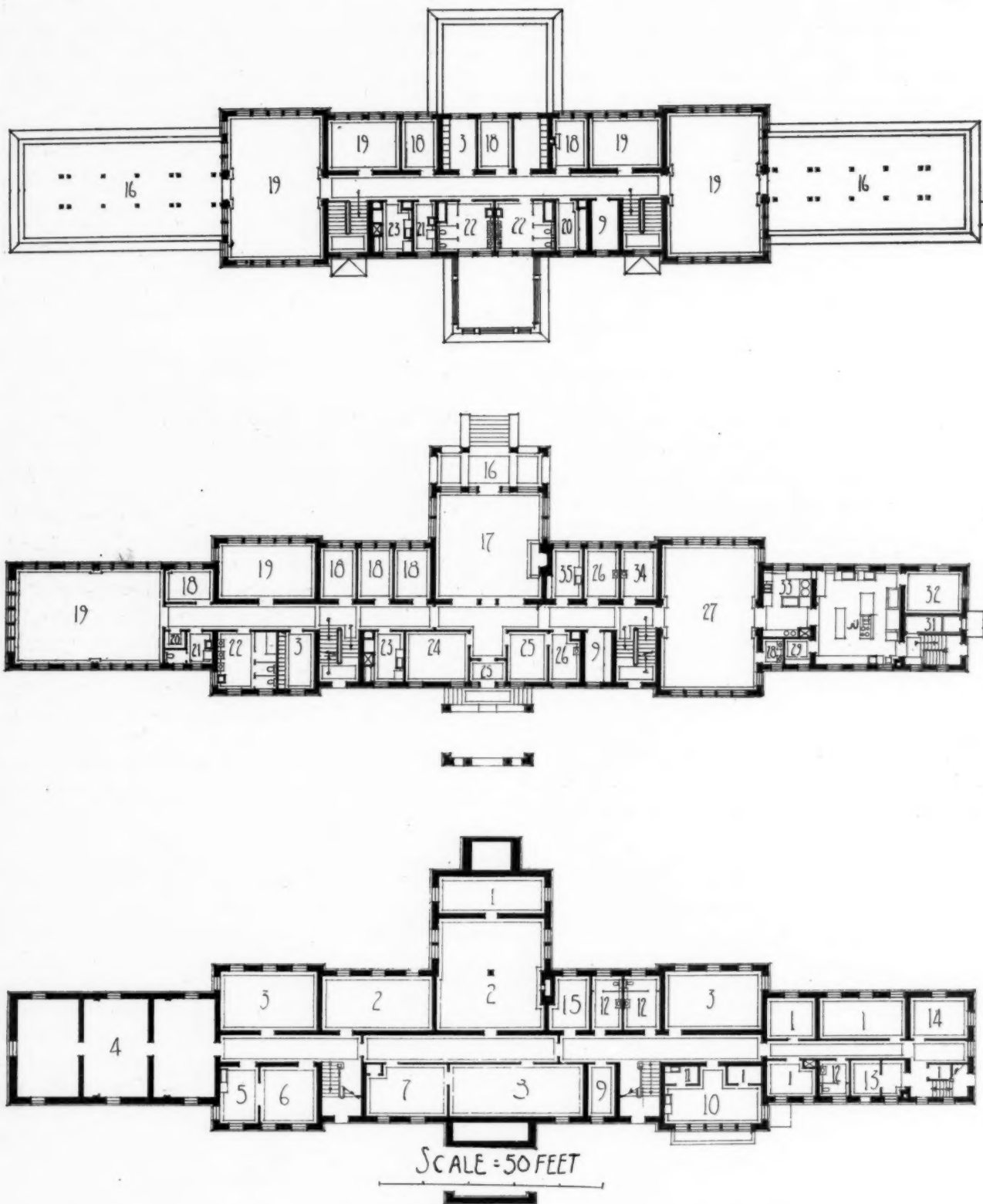


Fig. 5. Floor plan of the basement and the first and second floors of the Riverside Sanatorium.

- |                          |                          |                         |                            |
|--------------------------|--------------------------|-------------------------|----------------------------|
| 1. Stoke room.           | 0. Laboratory.           | 19. Ward.               | 28. Cuspidor room.         |
| 2. Trunk room.           | 11. Dark room.           | 20. Linen room.         | 29. Steward's office.      |
| 3. Locker room.          | 12. Public toilet.       | 21. Utility room.       | 30. Kitchen.               |
| 4. Unexcavated.          | 13. Fuel room.           | 22. Bath room.          | 31. Refrigerator room.     |
| 5. Autopsy room.         | 14. Refrigerating plant. | 23. Diet kitchen.       | 32. Servants' dining room. |
| 6. Morgue.               | 15. Cloak room.          | 24. General office.     | 33. Scullery.              |
| 7. Linen receiving room. | 16. Porch.               | 25. Physician's office. | 34. Guest room.            |
| 8. Sterilizing room.     | 17. Recreation room.     | 26. Examination room.   | 35. Nurses' room.          |
| 9. Elevator.             | 18. Patients' room.      | 27. Dining room.        |                            |



This is for the use of patients who might get an attack of coughing while at the table. Such a patient is required to go into this room to cough, and is permitted to expectorate in the cuspidors. This makes it unnecessary for patients to carry their sputum cups with them to the dining room.

The scullery and serving room is connected with the dining room by a pair of double-acting doors. All dishes are washed and sterilized in this room before being returned and stored in the kitchen. The equipment consists of a scraping table, an electric dishwashing machine, a clean dish table, a glass and silver sink, and a sterilizer. A large double cupboard is also placed in this room. The upper cupboard is set up eighteen inches above the lower, leaving the top of the latter free for serving purposes. The top of the upper part of

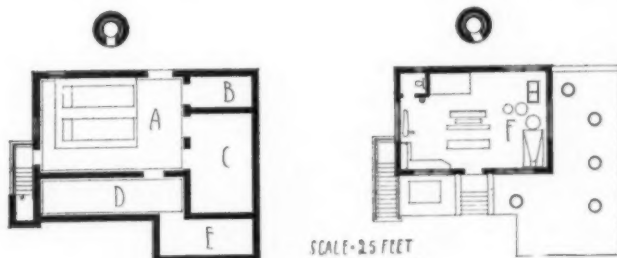


Fig. 6. Floor plan of the power plant of the Riverside Sanatorium.

A. Boiler room.  
B. Ash room.  
C. Fuel room.

D. Pump room.  
E. Room for pressure tank.  
F. Laundry.

this cupboard, as well as all other similar cupboards and lockers, comes flush with the plaster so as to prevent dust-catching surfaces that cannot be conveniently reached and cleaned.

The kitchen equipment consists of a hard coal range, vegetable steamer, combination steam table, cook's table and dishwarmer, urn stand and cupwarmer, coffee and hot water urns, serving table with cupboard for dish storage below, milk and cream cabinet, baker's table, vegetable sink, pot sink, butcher's sink and butcher's block. A large canopy extends over the range and vegetable cooker. This is connected to an exhaust fan that draws all smoke and steam off from the range and cooker. All cupboards, tables, and sinks in the kitchen and scullery are of metal, with the exception of the top for the baker's table and cook's table, which are of maple strips bolted and glued together.

The clean dish table in the scullery is connected with the kitchen through an opening in the wall, so that dishes can be shoved through. This arrangement has proved to be a great convenience and time-saver.

A large storage refrigerator and a small chef's refrigerator are located back of the kitchen. These are cooled from a refrigerating plant placed in

the basement directly below. The milk and cream of diet kitchen refrigerators is also made at this plant. The servants' dining room is located next to the kitchen and is a well-lighted, cheerful room with three large windows.

A small steward's office is located next to the kitchen and connected by a dumbwaiter with the store rooms in the basement below.

The second story is given up entirely to patients' quarters, with accommodations for twenty-nine; twenty can be cared for in two ten-bed wards, and the remainder in smaller wards and private rooms. Here, as well as on the floor be-



Fig. 7. Recreation rooms of the Riverside Sanatorium. French doors open into the corridor facing the entrance of the building.

low, the south side is used for patients' bedrooms and wards, while the toilets, utility rooms, etc., are placed on the north side. This floor is planned to be occupied by men, while the first floor is for women patients. The toilet and locker room facilities are so arranged, however, that patients of both sexes can be housed on this floor. The diet kitchen and utility room arrangement is the same as for the first floor. The flat roof over the kitchen and the large first-story ward is utilized as a roof terrace on which the patients may walk or sit. Beds may also be rolled out on this terrace, as the floor is almost level with that of the wards. Part of the terrace is covered with a roof that serves as a shelter in stormy weather and gives shade in the hot days of summer.

The windows in all the patients' rooms and wards have three sashes, so designed that they can be dropped into a pocket below the sill so that these rooms may be turned into what are virtually porches. Ceiling light fixtures in all the patients' rooms are of the indirect type. Indirect light fixtures with luminous bowls are used for the dining room and recreation room.

The signal system is of the silent type, arranged so that when a signal is given, a lamp is lighted over the door of the room where the call comes from, and also in the head nurse's office and at the nurse's desk on each floor. A buzzer is also provided at each of the nurse's desks, as well as in the head nurse's office, that can be cut into the system at will by the operation of a push button switch.

The doors throughout the first and second stories are of the flush veneer type, except for the French doors, which are mill made. All doors have transoms. These are made of wood to match the doors in all the patients' rooms, so as to prevent light from shining through. The woodwork throughout is birch, stained a tobacco brown color, varnished, and rubbed.

The floors throughout the first and second stories are of terrazzo with coved base six inches high. This base extends through all door openings with the jambs set on top of the base. The stairways, from basement up, are of terrazzo, with the corners rounded to make cleaning easy.

An intercommunicating telephone system is installed, with stations in the general office, superintendent's office, head nurse's office, the nurse's desk on each floor, kitchen, laboratory, laundry, nurses' home, power plant, and water filtration plant. The city telephone is also installed in the general and superintendent's office and in a booth for the use of patients.

In the power plant and laundry building are located the two boilers, cold and hot water supply tanks, the necessary pumps for the heating system, fuel and ash rooms, etc. The heating system is a two-pipe vacuum system. This is much to be preferred to a gravity system of steam heating as all condensation is pumped back into the boiler room, eliminating all possibility of the radiators filling with water where the windows are kept open in cold weather. It also does away with air valves, necessary on a gravity system, which so often cause annoyance through leakage and escaping steam, if not properly regulated. The vacuum system of heating should therefore be used in sanatoriums where money will permit.

The laundry occupies the entire floor above the power plant and therefore has good light and ventilation. The equipment is up-to-date, and consists of one large washer, extractor, flat work ironer, mechanical dryer, soap tank, starch cooker, ironing tables, body ironer, and cupboards. All machines are driven with individual motors, thus eliminating the noise and waste of power incident to shafting and the extra pulleys and belts made necessary when several machines are run by one motor.

Everything has been designed to promote efficiency and the superintendent of the institution says that it "is the best constructed, most conveniently arranged and well-equipped institution" with which she has ever been connected during her experience.

#### POOR FARM GOES INTO THE DISCARD

##### County Infirmiry Takes Its Place in Up-to-Date Communities—What a Rural County Can Do at Small Expense

By CHARLES E. ALLEN, Superintendent Bartlesville Hospital, Washington County, Oklahoma

"Over the hills to the poor farm," is a phrase which is going to lose its dread for the sick and old and poor in communities which follow the example of Washington County, Oklahoma.

The evolution from poor farm to county hospital is perfectly illustrated in the plan carried out by the county commissioners in the combined county hospital and home which was adopted in April, 1918.

Up to this time the county charges had been cared for at the county farm at Ramona, twenty miles from the county seat. There were no facilities for caring for the sick and consequently they had to be removed to the Bartlesville hospital at great expense to the county and often at the cost of suffering to themselves. The first move to remedy this condition was made in March, 1917, when a building was leased in Bartlesville for a county infirmiry, and the inmates from the poor farm at Ramona were installed in it. An operating room was established, equipment installed, and a stock of drugs and supplies kept on hand for an emergency. Several minor and some major operations were successfully performed at much less cost than in the old days when the patients had to be transported from the poor farm.

The plan proved so successful and so much more economical than the old system that it was decided to make it permanent. The county commissioners were on the point of putting up a hospital for the poor, since renting was found to be both unsatisfactory and extravagant, when it was found that the Bartlesville hospital, owned by private interests, was for sale. A little repair and readjustment made it just what the commissioners needed. A four-room cottage was erected in the rear of the building for incurable cases. A trained surgical nurse was placed in charge of the operating room and a diet kitchen was installed under an experienced superintendent. A card index and report book give complete records of all cases and a financial report is made each month.

Not for anything would the county commissioners go back to the old system. It is surprising that out of the 4,800 counties in the United States, only 359 maintain hospitals for their poor, but the county hospital is steadily gaining ground.

#### Home Nursing Classes Started in Tenement Quarters

Five classes in elementary hygiene and home nursing for women are in full swing at the first Red Cross tenement headquarters opened in a four-room apartment rented by the Red Cross at 510 West 26th Street, New York City.

One class is made up of the younger women of the neighborhood, and the older women are instructed another evening.



## PRESENT-DAY MEANING OF SURGICAL ASEPSIS

**Undisturbed Wound-Healing the Ideal—Obtained When Protective Forces of the Body Can Cope With the Bacteria Entering the Wound—Quickness in Operating An Important Factor**

By ARTHUR E. HERTZLER, M.D., HALSTEAD HOSPITAL, HALSTEAD, KAS.

**G**ENERALLY speaking, asepsis means the absence of sepsis, which in clinical parlance means suppuration. Such a distinction was specific enough at the time when elimination of the grosser manifestation of suppuration was a great achievement. Since, however, it has come to be a disgrace for a surgeon to have a suppurating wound of his own making, we can concern ourselves with some of the finer details, for between ideal wound-healing and pus-formation there is a wide gap. We now broaden our conception of asepsis to encompass all that looks to undisturbed wound-healing.

So far as the material the surgeon uses, the product of the sterilizing room, we may speak of absolute absence of bacteria. The means employed to sterilize apparatus and dressings render them bacteria-free. It is no longer considered good form to blame the nurse for septic wounds that may confront us.

Once the relation of operator and patient are considered, we can no longer speak of a bacteria-free sphere; the surgeon and patient each bring his quota of bacteria. It becomes necessary then to consider the best way of coping with the few bacteria that gain access to our wounds. The greatest sources of bacteria are the skin and intestinal tract, for, since most of our operations invade one or the other, we most certainly disturb a greater or less number of bacteria. The regions which harbor the largest number of bacteria, as about the rectum and mouth, often are the best able to cope with them, because of an abundant circulation.

Another source of contamination is the surgeon's hands. He is apt to finger more or less the surface of the body, and, when then the fingers enter the wound, bacteria are deposited. Koenig long taught that the large joints of the body could be safely opened only when all manipulations were carried out by means of instruments which had been sterilized by boiling. Lane has more recently emphasized the same idea in his technique of bone-plating. The general use of rubber gloves has much reduced the frequency of direct finger contamination, but even with their use bacteria are sometimes transmitted by the surgeon. If the surgeon allows his fingers to become contaminated by pus he will occasionally find that he has transmitted a malignant organ-

ism of a species which infected a previous patient.

Oral examinations also may gain entrance to the wound. Nasal respiration does not disseminate bacteria. Speaking produces more or less salivary spray which transmits bacteria. This is particularly true if the surgeon engages in vehement criticism of assistants or nurses. The surgeon should, therefore, either keep his mouth shut or covered while operating.

The use of a separate operating room and operating room personnel for pus cases is of prime importance. Open hospitals, where inexperienced men operate, should have a special room for them, for this type of operator has means all his own of putting a spike in the machinery of the regular operator.

The foregoing remarks have to do with lessening to a minimum the number of bacteria that enter the wound, no matter how perfect the technique; the surgeon, however, must go on the theory that bacteria have gained entrance to his wound. His solicitude will then be directed to the preservation to the utmost of the defensive forces of the body. Those things which favor the development of the few virulent bacteria must be avoided, and anything which prevents the activity of the defensive factors must be shunned. Hemorrhage must be carefully controlled. Dead spaces must be prevented in order that blood and serum may not collect. This can be accomplished by suturing and hemostasis. Mere ligation produces an irritation which invites exudation, therefore as few vessels as possible may be cut. Any brusque manipulation adds its quota of destroyed tissue which, in turn, produces an exudate favorable to bacterial growth. The use of irritating ligatures may cause an exudate; therefore, the least irritating suture should be employed. No chemical may be allowed to enter the wound and all harmful physical agents, notably the hot pack, must be avoided.

Time also is an important factor. The more quickly an operation is done, generally speaking, the better, for quickness implies that the surgeon has done his job in a workmanlike manner and spent no time in producing needless traumã. Finally, the relation to the environment must be pleasant. If the surgeon's assistants are in fear of criticism, there is more likelihood of error than if all work is in sympathetic harmony.

## JOHN SEALY HOSPITAL, GALVESTON, TEXAS

### No Longer One Hospital But Many — Steadily Increasing Group Grown Up Around Original Building of 1889—Noteworthy Children's Pavilion and Woman's Hospital

By MRS. T. MILNE, SUPERINTENDENT AULTMAN HOSPITAL, CANTON, OHIO

**T**HIS institution was founded by the bequest of John Sealy, who died in August, 1884. Possessed of a large fortune, inspired by generous and philanthropic motives, and realizing the great need of a hospital in Galveston, he left



Fig. 1. Main building of the John Sealy Hospital, Galveston, Tex. This building has been twice remodeled and enlarged since it was built in 1889.

\$75,000 to be devoted to establishing an up-to-date hospital in the city. He named the city council of Galveston and the regents of the University of Texas to manage and conduct the institution jointly for the reception and care of the sick. According to the will of the generous founder, the regents and their successors are to have the direction, ownership, and disposition of the hospital. An additional \$50,000 was given by Mrs. Rebecca Sealy to complete and equip properly the original hospital building. The hospital was erected in the year 1889-1890, and many new buildings and renovations have been added to it since that date. The present capacity of the hospital is 330 beds.

The main building of the hospital was repaired, renovated, and remodeled in 1912 at a cost of \$80,000, and, in the years 1915 and 1916, it was again remodeled, enlarged, and refurnished at a cost of \$270,500. These improvements, indispensable for the efficiency of the institution, were made possible only through the philanthropic generosity of Mrs. R. Waverly Smith and Mr. John Sealy, daughter and son of the founders of the hospital, whose wise benefactions doubtless inspired in their children a desire to see the benevolent work inaugurated by their parents carried on to its full fruition.

The main building with its beautiful Gothic entrance contains on the first floor the adminis-

trative offices, reception room, men's surgical ward of twenty-two beds, men's medical ward, devoted entirely to marine and navy patients, bathrooms, diet kitchens, storerooms, and the nurses' dining room. This is a large, well-lighted, airy room with tables for four persons, which make it look quite homelike. The cafeteria system is used in the nurses' dining room and is found to be a great success.

On the second floor are nine beautifully furnished private rooms and two wards, each of twenty-two beds, with large porches, on which the patients rest and smoke. On the third floor are eight private rooms, each of which has a view of the sea. In many of the rooms the patients can lie in bed and watch the large ships come into the harbor. There are also a private ward of twenty-two beds, bathrooms, diet kitchen, supply rooms, the main operating room furnished in white tile, sterilizing room, small operating room, x-ray room, and pathological laboratory.

A brick building for colored patients was built in 1901 at a cost of \$18,500, donated by the New York Chamber of Commerce. This was supplemented by \$3,000 from the funds of the general



Fig. 2. These newcomers to the John Sealy Hospital enjoy the benefit of Texas' climate on the long sun parlors provided for them.

relief committee of 1900. This concrete, two-story building accommodates sixty-three beds. The first floor contains one public ward of thirty beds, diet kitchen, dressing room, supply rooms, and nurses' dining room. On the second floor are one private room, one private ward of four beds,



one public ward of twenty-five beds, and a well-equipped delivery room. The colored patients have every home comfort given them, but their hospital is badly in need of more beds. Often eighty-five patients are in this hospital at a time.

The isolation pavilion for contagious diseases



Fig. 3. A sunny corner of the nursery of the John Sealy Hospital.

was built and furnished in 1912 by the board of regents at a cost of \$17,500. Of this sum \$13,000 was taken from the state appropriation for the Galveston quarantine station and \$4,500 from the available university fund. All infectious diseases are taken to this building, which is separate and away from the other buildings. Its six private rooms and four wards contain accommodations for thirty patients. The nurses in charge have rooms there and are kept apart from the other nurses.

A children's hospital was added to the group of buildings in 1912 by the Texas Anti-Tuberculosis Society at a cost of \$13,000, raised by the sale of Red Cross Stamps. It was furnished by the Young Ladies' Hospital Society of Galveston. In this two-story cement building many children with all forms of tuberculosis are kept on the porch, where they have sunshine, fresh air, and good food, and in a short time show great improvement in their condition as a rule.

On the first floor are the reception rooms, kitchen, private room of four beds, ward of eight beds, and porch of eight beds, always occupied by tuberculous children. The well-kept linen rooms, bath rooms, and supply closets are also on this floor. The second floor is set apart for babies, with a ward which contains eight beds and a porch

which contains six. There are besides two private rooms, dressing rooms, and sewing and supply rooms. The wards are well ventilated and well lighted and are arranged so that the sun can shine in all day. The children are given every comfort, and phonographs and toys help to make the children's hospital a happy home. The nurses try to make the children forget their pains and troubles through play and occupation, and the ones who are able have been taught to knit. During the war they did their best for the Red Cross, and twelve pairs of socks, eighteen pairs of wristlets, eighteen sweaters, nine mufflers, three helmets, three dozen knitted wash cloths, and thirty woolen squares bear witness to the busy fingers and big hearts of these small patriots.

The woman's hospital was erected and furnished in the years 1914 and 1915 by Mrs. R. Waverley Smith and Mr. John Sealy at a cost of \$4,000. It is equipped with cosy porches on each floor, which extend the whole length of the building. On the first floor is a pleasant reception room, an attractive private ward of eight beds, diet kitchens, treatment rooms, sewing rooms, and storerooms for the hospital supplies and linen. On the second floor is a ward of eight beds, one of six, and one of four; here are found also the well-lighted, sunny nursery with a southerly aspect, the delivery room, bathrooms, treatment rooms, diet kitchens, and linen rooms. The third floor contains ten private rooms, treatment rooms, linen cupboards, etc. The large porch is well screened and has an ample supply of easy chairs so that convalescent patients can have the full benefit of the sea breeze and sunshine. On the



Fig. 4. Rebecca Sealy Home for Nurses. Built by the state in 1914-1915, this building provides commodious and pleasant home for the eighty nurses in training of the John Sealy Hospital.

fourth floor are two wards of thirteen and eight beds, diet kitchens, treatment rooms, bathrooms, and the operating room.

The Rebecca Sealy Home for Nurses was built by the state in the years 1914 and 1915 at a cost of \$90,000, and furnished by the city of Galveston at a cost of \$4,000. It is a large cement build-

ing with accommodations for eighty nurses in training. In the basement are the box rooms and diet kitchen where the practical work on dietetics is taught. On the first floor is a comfortable and well-furnished sitting room. The second and third floors are entirely devoted to bedrooms, each nurse having a separate room. The superintendent of the hospital and the superintendent of nurses each has her suite of rooms in the nurses' home.

The school of nursing is of high grade, and has grown so much of late that it was found necessary to house the graduate nurses in nicely furnished, homelike cottages. A two-story cottage is used for the probationer nurses.

The hospital is well staffed and is divided into three departments, administrative, medical, and nursing. The superintendent is in charge of the administrative part; the superintendent of nurses is in charge of nursing with her assistant and the instructor of nurses; a graduate nurse is in charge of each building, and two graduate nurses are in charge of the operating rooms. A pathologist, and x-ray operator, and a woman anesthetist are also employed. Seven interns are employed

in the hospital and housed in a separate building.

The kitchens with their floors, walls, and ceilings of white tile are located in the basement. Under the dietitian who is in charge are two university pupils who are taking two months' training in practical dietetics. The basement also houses the pharmacy and the servants' dining rooms.

The entire laundry work for the hospital is done in the well-equipped and up-to-date laundry.

The out-patient clinic of the John Sealy is very complete and up to date. It has separate departments for white and colored patients. There is a well-equipped operating room where minor operations are performed and an emergency room where ambulance cases are admitted and examined by the intern before being assigned to their different departments. The mornings are devoted to medical, surgical, and gynecological cases; the afternoons to eye, ear, nose, and throat, and children's diseases. The salvarsan treatment is given twice a week to the outside patients. A graduate nurse is in charge of the nursing in this department with her three assistants, who are nurses in training.

## SPRING PREPAREDNESS FOR BLANKETS AND PILLOWS IN THE HOSPITAL

### Some Points About the Washing and Care of Wool and Cotton Blankets—Renovating Feather Pillows in the Laundry

By LINA STRYKER FISH, HOUSEKEEPER, CHICAGO MUNICIPAL TUBERCULOSIS SANITARIUM, CHICAGO

**A**T this special time of the year comes the real work relative to the season and to "spring preparedness." We are confronted now with the care of blankets. These are among the most expensive accessories of the housekeeping department, and upon their care depends their longevity and the comfort one takes in using them. We have in use between forty-five hundred and five thousand blankets. These comprise all-wool single blankets and 60 per cent wool double, and, as usual in institutions, whether the number of blankets is large or small, no place was prepared for their care. The first year that it became necessary to look after this matter, I was confronted with a problem, but, as "necessity is the mother of invention," I took the bull by the horns, and we have evolved a system that has been found safe as far as moths or dust are concerned and very efficacious.

We took rooms that were used for storage, seeing to it that they were not subject to floods or sweating steam pipes, and put up cases of "deaded" ceiling, arranging them so that each compartment held just so many single or double

blankets, folded exactly alike. We knew that when we had that space filled we had its allotted number. Upon the many cases we kept a card index. The index corresponded with the blankets inside and with the different units sending them for storage. By this means we were able to return in the fall, when needed, the same blankets that had been given care during the summer. We were very careful to see that moth marbles were placed among them in sufficient numbers to insure against any damage from moths, and I can state that, owing to this plan, we have never had a single blanket attacked by that dreaded summer scourge, the moth. It might be well to state here that all blankets are examined carefully to decide whether they require laundering or merely airing.

When laundering was required, we saw to careful washing. One of the most important factors in a successful cleansing is the soap. It is necessary, in consideration of the animal wool, to have a vegetable soap if possible for the purpose of keeping down the shrinkage, and, of course, the water must be kept at the same temperature throughout the process. It is best to give them



two suds but not to use too much soap; the second suds should be light, with almost one-half less soap than the first. All soap must be rinsed out for perfect work. With the drying of woolen blankets comes the principal task. Many are obliged, from restricted grounds, to use the dry-room tumbler, and this will do the work if the heat is regulated to a little above natural, but if the blankets are given too much heat they shrink and become hard, no matter how well washed. If it is possible, they should be dried outside, preferably on the lawn, as it is much easier to spread them and it makes such a difference in their condition if they are exposed to sun and air. In the case of cotton blankets, the drying should be done with the dry-room tumbler or in a dry-room rather than with the mangle. We all know that there is more wear and tear in the laundering and mangling of flat work than in the using. Cotton blankets can be folded up systematically and piled from the dryer, and then the nap is saved and they will still be sufficiently smooth for the bed. One-half of the wear, as we have found by experience, results from putting them through the mangle. This, of course, applies more directly

where cotton blankets are used for outdoor sleeping and take the place of sheets. The tendency with the substitute for the sheets is to put it through the laundry more often than is necessary, for the habit of a change of sheets every week is strong.

While speaking of blankets, it may be said that feather pillows can also be treated to a bath and renovating bills be saved. The pillows should be put in the machine with about the same soap that would be used for blankets; regular laundry soap will do for this. The loads should not be heavy. The water should be a little warmer than for blankets, and the pillows should be given a good washing. Of course the extent of the first suds depends on the condition of the pillow. They should be given a second suds and rinsed several times. All the water must be kept at the same temperature after the first suds. Then the principal thing is the drying. They should be put in the dry-room tumbler and kept tumbling until dry. If there is not time to give them a full drying in the tumbler they can be placed in the regular dryer and finished in the tumbler. They will come out like new pillows.

## FIGHTING THE BACTERIA THAT CAUSE INFECTION

### A Sterile Surface and Sterile Instruments the Commonplace of Caution—Punctured Rubber Gloves a Source of Danger—Necessity for Sharp Instruments and Gentle Handling to Leave Defensive Tissue

BY FRANK J. HALL, M.D., CONSULTING PATHOLOGIST, WESLEY HOSPITAL, KANSAS CITY, MO.

IT seems strange that so many otherwise excellent hospitals still are having trouble with infections of operative wounds obviously contracted in the operating rooms. Close bacteriological scrutiny of suture material and gauze has never in my hands revealed the source of the infection. The surgeon is often disposed to fix the blame on the nurses or the operating-room materials. It is my conviction that this is unjust in the vast majority of cases and that the real blame attaches to those whose fingers have come in contact with the wounded tissue. This view has led me to survey this problem from every angle from which it was possible to trace the source of these embarrassing infections and suggest preventive remedies. First, it is to be pointed out that but very few species of micro-organisms are found in these lesions and that these possess a feeble resistance to the customary steaming and boiling generally practiced in the preparation of instruments and linen and to the cleansing and chemical treatment of the skin surfaces of the patient. The organisms generally recovered in cultures and identified

on direct staining of the pus are in order of frequency, *Staphylococcus albus*, *Staphylococcus aureus*, *Streptococcus pyogenes*, *Bacillus coli*, and *Bacillus pyocyaneus*. None of these are spore-bearing and all are safely killed by fifteen minutes' boiling or steaming. These precautions, applied to rubber gloves, instruments, gauze pads, and towels are more than adequately taken in all hospitals, hence one narrows the inquiry down to a few simple factors.

First of these is the much-maligned suture material, preparation of the patient's body surfaces, condition of the surgeon's rubber gloves, and, finally, the mechanical treatment of the wound itself. Modern suture material is so faultlessly prepared, stored, and antiseptized, that it is the last guess to blame it for wound infections. This conclusion is borne out by many negative culture tests, which I have conducted on suture material obtained from several standard manufacturers.

In the preparation of the patient's body, nothing seems to me to be superior to the standard

tincture of iodine, applied at least thirty minutes before the contemplated operation and upon a scrubbed, shaved if necessary, thoroughly dried, and oil-free skin surface. Each of these items of preparation is very important; the iodine will not penetrate a wet or oily skin, neither can it efficiently sterilize the skin to the necessary depth in a few moments, as I have often seen surgeons expect it to do. I also believe it to be undesirable to wash off the iodine with alcohol and thus deprive the skin of its continuous action during the operation. To obtain an oil-free skin, two available chemicals can be obtained anywhere, namely, ether and benzine.

Next in importance is to minimize the number of hands that touch the wound. Never, under any circumstances, permit a bystander to explore for demonstration purposes, even if he be gloved and properly prepared, previous to the operation. In his preoccupation in watching proceedings, he may have scratched his nose or adjusted his glasses. These curious faults have doubtless been observed as frequently as is necessary to convince a careful operator of the necessity of rigorously following this rule.

Next of importance is to avoid traumatizing the wound unnecessarily by the use of dull knives or scissors, or by an incision too short to permit of easy access to the lesion to be remedied. This leads to undue traction on the wound edge. When inflicted upon fat and thick abdominal walls, this leads to the crushing and devitalization of poorly nourished fat cells and leaves behind a lot of free fat and a poorly defensive tissue. Blinded spaces of every kind must always be most carefully guarded against.

After this in importance comes the rubber glove. After a rubber glove is used three or four times it begins to sag, loses its life, and invites the formation of pores, minute tears, and becomes very vulnerable to puncture. This puncture item is most important in the prevention of wound infection. In the old days, before the advent of the rubber gloves, bitter experience had taught the necessity for great care in the toilet of the surgical hand. Today we see an ever-increasing laxity in this particular, on account of the universal dependence on the sterile rubber glove. This confidence is well placed, if the sterile glove remains intact.

Alas! this is not always assured. One sees surgeons of otherwise faultless technique reaching into the depths of a deep incision to grasp a needle to pull it through the tissue. A minute puncture expanded under the pressure exerted permits a small drop of sweat from the surgeon's hand to gain admittance to an otherwise sterile

wound, and then everyone wonders why an infection follows. When a surgeon has an infection of the finger nail of even the most minor degree, it is very important that new gloves be worn and that all needles be grasped by forceps rather than by the gloved hand.

Finally, the tension of the closing sutures must be carefully observed, and I am ashamed to express this caution, as it is so well known, because of the great necessity that a proper and unstrangled blood supply be furnished to the wound to assure complete nutritive supply for the proper repair. It would be better to leave an infected wound wide open, than to close too tightly a physiologically sterile one. By the term "physiologically sterile incision," we mean an incision that has not received a sufficient quantity of infective organisms to break down the defenses of an otherwise normal surgical wound. It is inconceivable that any surgical wound is classically sterile. The great problem is to avoid inflicting upon a clean tissue an infecting dose of pyogenic organisms.

Next is to be considered the wound dressing. When one has observed all the known rules for avoiding trouble, what kind of dressing is to be applied? Personally, I am committed to the belief in non-absorbent dressing for presumably safe surgical incision. Why? Because the natural wound secretion is Nature's best defense against all comers, unless they be grossly superior in numbers or virulence. The fibrine threads provide the bridge over which fibroblasts cross and new capillaries penetrate. The serum of the blood and the lymph from their channels provide the necessary, natural defensive antibodies and proteids.

If the following forty-eight hours see no rise in temperature or pulse and no unnatural sensations, let well enough alone. If the contrary be true, remove the dressing and examine, eye first, the wound. If evidence of infection be present, it will be evinced in the following ways: tumefaction, local abscess, diffuse erysipelatous reddening, or fetid odor. Tumefaction without pus formation can be successfully met by cold packs. Local abscess must be evacuated. Diffuse erysipelatous reddening is the nut to crack. Two methods are to be applied, the first biological, the application of antistreptococcus serum to the wound. This should be applied on a thin cotton layer covered by rubber tissue to inhibit evaporation. The second method employs iced solution of 40 per cent magnesium sulphate. The fetid wounds should be mopped out every day with 0.5 per cent of formaldehyde in a 10 per cent solution of glycerine. This procedure also applies to the green-pus wounds.



## SUGGESTED IMPROVEMENTS IN DISPENSARY SERVICE

**The Clinic Requires More Serious Attention Than it Receives—Improvement to Be Found in Social Service, Pay Clinics, Better Records, and Discrimination Among the Poor**

BY ISIDORE COHN, M.D., FELLOW AMERICAN COLLEGE OF SURGEONS, NEW ORLEANS.

THE modern dispensary and out-patient service represents one of the greatest forces for the welfare of a community. This fact is not understood thoroughly by the medical profession and hardly, if at all, by the lay community. The reason that the value of this type of public service is not understood by the medical profession as a whole is that a large percentage of them think only of utilizing their time in ways that will return immediate financial dividends. The community looks upon clinics only as a haven for the pauper class.

The conception of both is equally wrong and shortsighted.

A clinic offers opportunities for relief of the poor, which are denied the middle class and can be obtained by the rich only at great expense. The etiology of obscure conditions is sought through liberal consultations and with the aid of the clinical laboratory. After investigation, the cause having been determined, the proper treatment is instituted and the period of disability diminished. In this way the clinic acts as a source of prevention of human waste. Those in need of clinic service know this, and they seek out and find those clinics which are properly administered.

Aside from this great service to the public, clinics have a more far-reaching benefit, which is reflected in the service rendered by the doctor to private patients. The true saying, "Experience is the best teacher," approaches the axiomatic here.

Edward Martin, of Philadelphia, has said, "When a man graduates from a medical school he is only 20 per cent efficient to his community, but when in addition he is trained in a good hospital, he is competent; a teaching hospital means to the community 80 per cent of such a man's efficiency." Add to the period of internship, hospital association through the dispensary service, and we have increased the 80 per cent efficiency already acquired. Dispensary service should teach the attendant to keep systematic, concise records, as well as give him a keener appreciation of clinical phenomena, and hence more accurate diagnostic acumen.

The American College of Surgeons is making an effort to raise the standards of practice by demanding certain requirements of the men upon whom it sets its seal of approval. The clinical

opportunities of a good dispensary pave the way to the goal. Eventually the community will be as particular about the surgeon as they are exacting in other directions. When that time comes, the dispensary will not have to plead for the cooperation of the medical men; they will seek the opportunity to learn.

One of the reasons for a low standard of dispensary service is the lack of cooperation on the part of the average dispensary patient, due to ignorance on his part. As a result of the survey of Boston we are informed, by Dr. J. A. Hornsby, that 89 per cent of the sick are treated in their homes. Laboratories and consultants are needed in many cases for a scientifically accurate diagnosis. If 89 per cent are treated in the home, and if of this 89 per cent a greater percentage still are treated by the lodge or society doctor, then the fact can be realized that the majority of our own people are not given the best medical care. The dispensary can rectify this condition to a great degree with the intelligent cooperation of the patient and the extension of social service in connection with the dispensary. The following suggestions for improvements may be helpful: (1) enlarge the social service department; (2) weed out all save the needy; (3) establish afternoon clinics; (4) establish pay clinics; (5) keep better records; (6) make frequent clinical reports.

Improvements in dispensary service may be expected along many lines when all concerned have come to a full appreciation of the value of the work. Emphasis should be laid upon the need of weeding out all except those entitled to free dispensary service. This can be done by enlarging our social service investigation department to the extent that each applicant for service must prove his inability to pay for adequate medical attention.

The fact that so many apply for treatment, who do not belong to the pauper class, suggests that there is something wrong with the type of service the small-salaried individual can obtain. The lodge doctor is underpaid and overworked; his facilities for accurate scientific diagnosis are meager and to suggest consultation means a confession of his own lack of certainty regarding the diagnosis; hence he does not call for consultation.

The result is a slipshod, empiric practice. If the dispensary plan can be broadened so as to take care of salaried men for a moderate fee, which would be paid into the hospital funds and properly divided, the economic saving would be great and probably many human lives could be saved.

Afternoon clinics would improve dispensary service in more than one way, particularly because it would enable the house staff to participate in the dispensary work. As it is today in many large hospitals, the intern has time only to assist in operations and give anesthetics. The best opportunity which the intern could possibly have for practice in differential diagnosis, is the clinic. Individual work under capable supervision is the best type of instruction. With the organization of an afternoon clinic and the ruling that dispensary service is part of hospital duty,

as well as a stepping-stone for staff appointment, the dispensary service will be improved by the greater number of attendants and the public would eventually realize on the investment.

Better clinical records would improve dispensary service. The use of a cross-index filing system would make statistical computations from clinics easier of accomplishment and improve the final value of the clinic. Frequent publication of clinical reports stimulates interest, as well as improves the records.

In summary, the improvement to be expected in dispensary service will come through the co-operation of the hospital administration in providing adequate working material, of the visiting staff through conscientious effort, irrespective of the time-element, and of a community which is willing not to impose on a service due others.

### WHAT IS MEANT BY SURGICAL ASEPSIS?

#### Greatest Care Necessary in the Sterilization of Instruments—An Alcohol Bath Inadequate—Danger From Spectators at An Operation

By A. NELKEN, M.D., UROLOGIST, TOURO INFIRMARY, NEW ORLEANS

**A**T first blush the title of this paper, intended as it is for publication in a magazine circulating particularly among doctors and nurses, would suggest an enormous amount of presumption on the part of the writer. For why should physicians and graduate nurses require enlightenment on such a fundamental doctrine of their education as surgical asepsis? As well set about teaching the mathematician the multiplication table or the chemist the names of the elements. I do not mean to imply that any but a small percentage of surgeons and nurses require instruction along this line, but twenty years of intimate hospital association with both doctors and nurses has impressed upon me the fact that there is a great difference between the theory and the practice of aseptic surgery.

Infringements of generally accepted rules of procedure in asepsis are commonly due not to ignorance of the rules but rather to indifference or to impatience on the part of the surgeon or of his assistants. Few indeed have the excuse of the old country doctor whom I once saw walk up to the instrument tray during the progress of an operation and begin to finger the operating knives.

"But, doctor," exclaimed the startled operator, "your hands are not clean."

"Yes, they are," was the confident reply, "I washed them this morning."

His error was one of ignorance. But what of the professor of gynecology and obstetrics who permits himself to adjust his glasses at intervals throughout an operation because he has taken the more than doubtful precaution of rinsing them in alcohol? It is true that at best absolute asepsis is only theoretically possible, but the practical application of aseptic technique in surgery combines very definite requirements with very narrow restrictions.

Let us consider the measures at our disposal for securing sterility. Heat, of course, stands first. All instruments and dressings that will not be damaged by it should be subjected to a temperature high enough to destroy any organisms with which they might be contaminated. There is a general prejudice against the boiling of cutting instruments. This objection is, I think, largely ill-founded. The dulling of knives and scissors by boiling is due, I believe, more often to the careless striking of their edges against other instruments than to the effects of heat. However, if there be objection to the boiling of such instruments in water, it has recently been suggested that we boil them in oil. With all due regard to the surgeon's pet scalpel, if my own abdomen were to be opened, I had rather that the knife be not quite so sharp, perhaps, but certainly sterile. The usual practice of first immersing cutting instruments in carbolic acid and then



washing off the acid with alcohol is probably safe, provided the instruments have first been thoroughly cleaned mechanically. But the practice, with which I am familiar, of putting knives, scissors, and glass syringes in a tray containing alcohol which, sometimes, does not even entirely cover them, is, most of us will concede, entirely inadequate sterilization.

One of the common fallacies in regard to "sterilization," so-called, is the use of weak solutions of carbolic acid (1:20), bichloride of mercury (1:1000) or formaldehyde (1:1000) for instruments that may be injured by heat, as, for example, such instruments as cystoscopes and varnished catheters. If first mechanically cleansed and then left in these solutions for hours, such instruments may be considered sterile, but the usual practice of immersing them in such solution for a few minutes and then assuming that they are safe for use would be amusing if it were not sometimes tragic.

The introduction of the rubber glove in surgery—the boiled hand—was an enormous advance towards ideal asepsis, but the handling of the outside of the glove in the putting of it on and in adjusting it should be discouraged. Gloves may be absolutely sterile and then be contaminated by hands which, no matter how carefully scrubbed up, can never be "surgically clean."

In the early Listerian period, surgeons sought to secure aseptic surroundings by spraying the air with solutions of carbolic acid. One of the reasons—among others—for abandoning this method was the final realization, after considerable observation, that atmospheric contamination is a negligible factor. Virulent types of pathogenic organisms are not ordinarily present in the atmosphere of the operating room, and the tissue-resistance of the patient is able to take care of whatever infection may occur from this source. This factor of resistance in the patient is the explanation of carelessness on the part of doctors and nurses who are thoroughly conversant with the technique of asepsis. They see four out of five clean wounds heal by primary union. The suppuration that occurs in the fifth case is ascribed to "infected catgut," or to any cause save the true one.

Let me attempt to draw a picture of an operation as we sometimes see it. The postgraduate class enters the operating room which, we at once notice, is entirely too small for teaching purposes and which contains no seats. The men of the class stand restlessly about as the operator and his assistants, having scrubbed up in the washroom, enter. The anesthetist has already begun the administration of the ether. The nurse

is busy arranging the instruments in the tray. While gloves and gowns are being put on, the operator is discoursing learnedly upon the operative indications for, let us say, inguinal hernia, and upon the proper operative technique. Benzine and iodine are applied and the operative field surrounded with sterile sheets and towels. The patient now begins to struggle against the ether. The operator and his assistants help the anesthetist to restrain him. In the struggle, dressings are disarranged, and gloved hands come in contact with non-sterile surfaces. Finally, the patient's efforts cease and he sleeps quietly. Which is the bichloride basin? Bichloride of mercury solution is the "holy water" of the operating room. Its magic touch washes away all sins of surgical uncleanness. Hurriedly, gloved hands are rinsed in it. The disarranged dressings are readjusted about the operative field. The knife is taken out of its alcohol bath, dried, and handed to the operator. "This knife is dull. Let me have another." There is no other prepared. A hurried trip to the instrument room by a nurse in waiting, and she returns with a sharper knife. This is dropped into the alcohol tray. "Where is the knife?" impatiently asks the operator. Almost immediately, the new knife is taken out of the alcohol and handed to him. Later, the same performance is gone through with the scissors. All of those in the tray are too dull. Another pair is secured, dropped into the alcohol for a minute or two, and handed to the operator. "Gentlemen, you will notice that I am now separating the sac from the cord." The class crowd about the operating table, each one seeking a vantage point. They have not even bothered to remove their street coats. They rub elbows with the operator and his assistants. Their coat tails brush against instrument trays and dressings. The sac is adherent to the scrotal tissues. Careful dissection is required to separate it. The skin of the scrotum has not been sterilized. The fingers of the operator come in contact with this non-sterile surface. Again, his hands are hurriedly immersed in the bichloride solution.

At last, the operation is finished. "A very pretty demonstration," wisely exclaim the onlookers to each other and to the well-satisfied operator. But they do not know that four days later the wound has to be reopened and drained for pus, and that, six months later, the hernia has recurred.

This picture is overdrawn, you say. Of course it is for the great volume of surgical operations as conducted in well-regulated clinics. But the point that I want to make is that, sometimes, we see just such careless application of aseptic tech-

nique on the part of men who ought to be guiltless of such gross violations of well-understood principles.

Both the surgeon and the nurse should cultivate what I like to call "an aseptic conscience." Conscience is the still, small voice, that tells us of

our misdeeds. A properly trained "aseptic conscience" should warn us when we are about to commit sins against surgical cleanliness; listening for this voice and heeding it should forestall that purgatory of the conscientious surgeon—infection following a "clean" operation.

## THE RECORD ROOM OF THE BARNES HOSPITAL

### How Indexes Are Organized—A Plan That Simplifies Filing, Economizes Space, and Makes All Records Readily Accessible

BY ELIZABETH GREEN, RECORD-KEEPER, BARNES HOSPITAL, ST. LOUIS

**H**OW to make a record department both efficient and economical is a problem for every hospital. In order to do this, careful consideration is necessary in the development of a record room. Records are bulky, and their expansion becomes a problem. Too often the record room is an afterthought, and a room planned for another purpose is used. A record room should be planned with expansion in mind. Should a loose-leaf system be decided upon, the filing cases will need an immense amount of floor space, and, eventually, it will be necessary to adopt a semi-loose-leaf system where the histories stitched into stiff pasteboard covers can be placed on bookshelves in order to make room for expansion. The usual, and possibly the safest, way of handling this problem is to bind the histories. This system insures against loss, as it is rather difficult to lose a large and bulky volume. At the Barnes Hospital we keep our histories for about a year in vertical filing cases, and then bind them so that we can shelve them and relieve the files.

The ideal record room should have adequate stack space to carry its expansion as well as enough vertical files for the most active histories, if a bound history system is used. Indexes should be kept in the same room in order that a minimum of time be spent in getting out histories.

The next thing is to instill in the record-room staff a proper sense of values. The important function of the record room must be made clear, namely, the facilitation of research and protection to the patient and the hospital. Never let any member of the record staff forget for a minute that this is the result to be attained. To accomplish this histories must be adequately indexed, so that the research worker has the material he wants at his disposal and the office can have what it calls for at a moment's notice. Histories fill two important and varied functions, for, while they become a research library of great value, they also furnish the greatest possible pro-

tection the hospital can have through their record of all examinations, operations, treatments, and tests made during the time the patient was in the hospital. In the event of a legal complication, these furnish the best possible brief for the patient and the hospital. Too many indexes are undesirable, and yet the ground to be covered must of necessity be observed from more than one point of view. Three indexes usually cover this, including name, diagnosis, and operation. Classifications for both diagnosis and operation must be selected and adhered to in order to make the files practical and useful, or else the same thing will be indexed under two or more titles.

The relation between the head of the record department and the doctors of the staff must be such that the doctors will come to the record department with the problems relating to the work they are interested in which they will later desire to investigate. If the head of the record department can make them appreciate her real interest in helping them to get at this information later, she will find out quickly what subjects it is well to index and that are not included in her files. It is a simple matter to index any subject at the time the rest of the indexing is being done and takes little time, whereas it is sometimes a difficult and tedious process to get at it either by diagnosis or operation. At the present time, for example, we have in our miscellaneous section of the diagnosis index, such titles as "Massive Dose Digitalis," "Histories Green Penciled and Motion Pictures," which obviously are not diagnoses, but are matters of interest to our staff. Later, should the interest die out, it is easy to discontinue or withdraw the cards from the files.

We index our histories at the Barnes Hospital by name, diagnosis, and operation. All cards are typewritten, and all files are arranged alphabetically.

The name index is the master-card of the system. On the face of the card are given the name,



age, sex, social condition, color, diagnosis, operation, service number, hospital number, date of admission and discharge, condition at discharge, and out-patient number. On the back of the card is whatever information we can secure for follow-up work, such as names and addresses of relatives, friends, and patient's physician. We also keep track of deaths of patients on the outside, as well as we can, through checking the death notices and burial permits from our local papers by our name index. When we find a name in these notices, the card is taken from the file, the word "dead" is added in red in the upper right-hand corner, and on the back of the card is added in red the date of the patient's death. A note is also added to the history, giving the date of death.

The diagnosis file is according to the Bellevue nomenclature. The diagnosis card has the name of the disease written at the upper left-hand corner and our reference is to service number. This plan is as economical of expansion as possible. Our histories are indexed according to services; consequently, in order to have one diagnosis file, we use a different-colored card for each service; thus, white means "medical service"; blue, "surgical"; salmon, "gynecological"; and buff, "obstetrical." Should we desire to see how many cases of tuberculosis, chronic, pulmonary, we have had, we turn to the infectious disease section, and under tuberculosis find all the cards with that diagnosis, separated into services by their color, but filed together in one file.

The operation index follows the plan of the diagnosis index.

At the discharge of a patient, the history is brought immediately to the record room, where it is kept accessible until "history meeting," which comes once a week. At history meeting diagnoses and final notes are added, and the histories are then returned to the record room as completed histories. A check is kept by the record department on histories that are due, and, should a history be held out, an explanation is requested. As soon as histories reach the record room, the work of getting them ready to index is begun. They are carefully inspected, all accessory reports are checked through a "lacking" list, and incomplete histories are noted and completed before filing. Histories are now ready for indexing, after which they are filed in vertical filing cases, until such time as it seems best to bind them. Histories are bound fifty to the volume by service number. This binding relieves the files and economizes space by shelving the histories.

At the time of indexing the histories, the annual report is taken. This is kept on cards, arranged by diagnosis and operation, similar to

the diagnosis and operation files already mentioned. All information that is to appear in the report is on these cards, and, at the end of the fiscal year, the cards are taken from the files, already properly arranged, and the totals are added. From these cards it is easy to compile the statistical tables of diseases and operations, and the finished report requires only a few days to complete.

How to meet quickly every request that comes to the record room to the satisfaction of the staff and still to have the work handled by a small force, is an ever-present problem. For the best interest of the hospital, this must be done, for why spend money on record room employees merely because the department is carrying routine which long ago outlived its usefulness? A watchful eye must be kept for extraneous matters, and careful pruning done in order to develop new interests efficiently and economically.

#### THOUSANDS REGISTER FOR TRAINING

##### Rapid Increase in Number of Disabled Men Applying for Special Education

Rapid progress is being made in reaching the disabled soldiers, sailors and marines, who have received such disabilities as a result of service that they require vocational retraining. The Federal Board for Vocational Education, designated by Congress to rehabilitate the disabled, reports a total of 57,611 cases of disabilities registered. This is an increase over the preceding month of 18,042 cases, or 48 percent. The increase in the number of cases for the month of February over the month of January was 73 percent, and the increase of January over December was 80 percent, and the increase for December over November was 50 percent. The average rate of increase for the four months being 62 percent.

The source of these cases is as follows: From the Bureau of War Risk Insurance, 10,231; from the Department of Labor, 117; from the Red Cross, 6,710; from the hospitals, 34,063; from the men direct, 4,725; from other agencies, 1,765. Contact has been established in 40,276 cases. The vocational advisers of the Federal Board have completed surveys in 32,730 cases. These preliminary surveys are the necessary basis and foundation for future action, and it is upon these records that the training awarded the disabled man is based. Necessarily it is a slow process to make an exhaustive survey of each case, coordinated with the personal desires and wishes of the patient, and finally arrive at a course suitable for the man and which he personally desires to follow.

Of the surveyed cases, 4,302 have been recommended for approval, and 2,359 cases have been approved, and training has begun in 1,395 cases. Thirteen have completed training, and 80, for one reason or another, have voluntarily discontinued training.

#### An Hour Glass for Hand Scrubbing

An hour glass filled with sand enough to run the number of minutes your operating room technic requires for its hand scrubbing, placed over the sinks where your surgeons scrub before operating, is a check on their aseptic conscience and absent-mindedness.

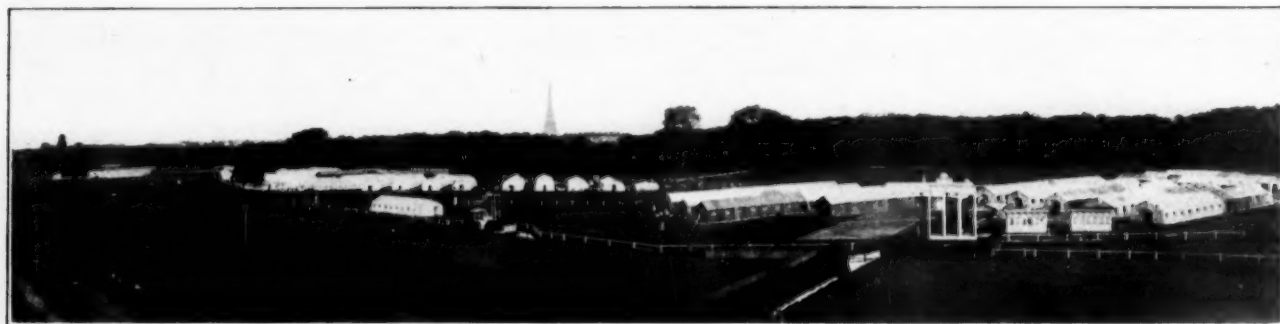


Fig. 1. American Red Cross Hospital No. 5 at Auteuil. The Bois de Boulogne and the Eiffel Tower are seen in the background.

### LITTLE JOURNEYS TO PLACES "OVER THERE"

#### American Red Cross Hospital No. 5—A Mushroom Growth on a Paris Race Course— American Nurses in French Hospitals Care for American Men

BY MARGARET J. ROBINSON, WITH THE AMERICAN RED CROSS, PARIS

THE Metropolitan race course at Auteuil is just a little outside of Paris by metro or the tramway. May, last year, it was a hayfield, with a deserted grandstand and betting booths. France had something else to do just then besides betting on running horses or watching the ladies of the high and low world of Paris display their latest exclusive creations in gowns and millinery and their lap dogs.

On these empty grounds, construction was begun for a mobile tent hospital on May 9, 1918. At 5 a. m., the morning of May 31, the first patient arrived—part of a consignment of one hundred sixty gassed Americans. One could hardly say that the construction of 600 beds was entirely completed at that time, but the hospital was ready for patients. As the number of these increased, equipment and personnel were added to care for them. Two thousand wounded from Château-Thierry were cared for later, and another thousand from the July drive. In August there were twenty-three hundred patients who had been brought directly from Château-Thierry, the Toul sector, and from the Argonne Forest. From June to December, of 1918, eighteen thousand cases in all were treated in the hospital.

The hospital, like all other Red Cross militarized hospitals, was constructed at the request of the United States army. The personnel of the medical staff was partly from the army and partly from the Red Cross. The Red Cross furnished the business management and all the supplies. Lieut.-Col. George de Tarnowsky, of Chicago, was in command of the hospital. Major J. F. Clarke, of Fairfield, Iowa, was his assistant, and in command in Colonel Tarnowsky's absence. Miss Harriet Leete, of Cleveland, was in charge of the nursing force. There were performed

1,875 operations, and in the six months of the hospital's existence, although it handled serious cases at all times, the records show that only 135 deaths occurred during this time.



Fig. 2. Old betting booths on the famous Metropolitan race course and the completed tents of American Red Cross Hospital No. 5.

Eighteen hundred gas cases were treated at one time. The nurses say that they will never forget the sight of all these men with bandaged eyes. Some of the recoveries from gas and from wounds were almost marvelous. Many cases, apparently hopeless, made good recovery. After the drive in the Argonne Forest, the convoys brought in were all of badly wounded men, and yet there were few deaths, comparatively few amputations in proportion to the number of serious injuries, and few cases that were not hopeful of an ultimate recovery.

At various times in the short career of the hospital, eight different mobile units were attached as needed and then moved on. The medical staff was of the best. Specialists of authority in their own line of work formed groups for diagnosis. All facilities for this diagnosis were at hand, and



definite case records were kept. Each case was an individual one, and the subject of individual study on the part of the medical officer in charge of it. The nursing force at one time numbered 168. There were Red Cross nurses, army nurses, British nurses and American and French nursing aides, all working together in harmony, and with great enthusiasm for the success of the hospital.



Fig. 3. Willing pack horses unload tent tops.

The block plan here shown is the original plan proposed for the hospital at Auteuil and provides for its growth. This plan had to be adopted because of the layout of the race track, and the necessity for protecting the turf which had taken many years in the making. Each unit was like an island in a sea of precious turf. About two-thirds of the plan was carried into execution.

The construction used was that of the Bes-soneau tents. These tents are built of heavy green white lined canvas on wooden skeleton

framework. There is a half-foot of space between the inside white lining and the outside green one. The windows are double and have an air space between. They are sash windows, going up and down, with panes of isinglass. They have a canvas flap on the outside to keep out sun and wind. Besides the regulation hospital ward tents, each with a capacity of fifty to one hundred men, there were tents for administration, for living quarters of the personnel, kitchen tents, tents for stores, for laundry, for operating rooms, for recreation and movies, for baths and disinfection, for the dentist and the chaplain, and tents for the nurses' offices and recreation rooms.

"Number 5" was a city of huts and tents, a complete hospitalization.

After the splendid surgery, scientific diagnosis, and devoted nursing care given to our men at Auteuil, perhaps the most significant thing noticed was the home atmosphere of this tent hospital, which was encouraged by the staff and personnel at all times. No more than the absolutely necessary discipline was used as far as the patients were concerned. All things necessary, even foolish things, were done to keep up the courage and cheerfulness of the men.

Bands of good musicians from Paris came once a week and gave concerts, and they were good concerts. Poor music and poor musicians are not tolerated over here. It is a criminal offense on the Continent to be a poor musician and pretend to be a good one. American Red Cross Kitchen No. 1 sent ice cream and cakes for all those who could eat them, and real doughnuts, too. The nurses baked honest-to-goodness American pies when they had time, and, if some boy was down-hearted and needed lifting up, they had a birthday party for him, even if it was not on the date

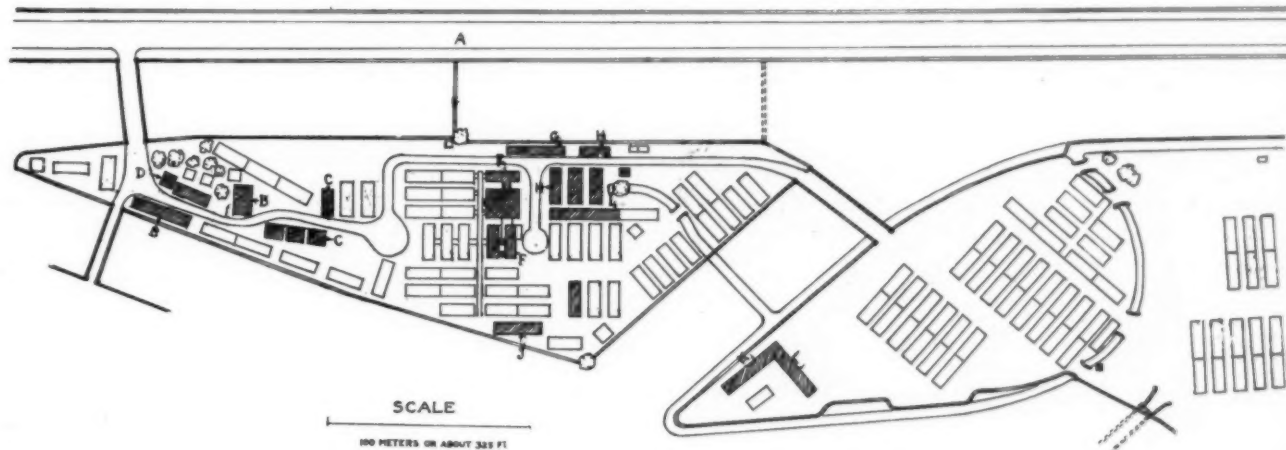


Fig. 4. Plan of American Red Cross Hospital No. 5. About two-thirds of this plan was carried into execution. The darkened rectangles represent the barracks, the others, the tents.

A. Allée des Fortifications.  
B. Offices.  
C. Linen barracks.  
D. Toilet rooms.

E. Cement barrack for surgical dressing.  
F. Baths.

G. Shower baths.  
H. Stores.  
I. Kitchen.

J. Pharmacy.  
K. Movies.  
L. Recreation hall.

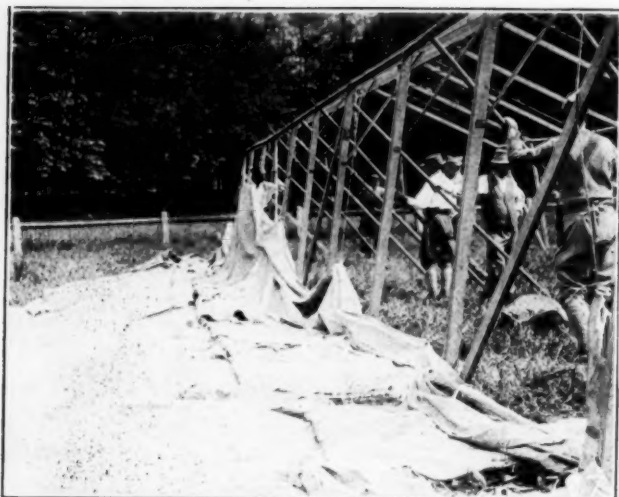


Fig. 5. When the framework is erected, the tent cover is laid on the ground ready to roll over it.

stated in the family Bible, and somebody made sandwiches and real coffee.

This supplementary feeding had a larger value than merely creating a cheerful atmosphere. When a man lies on his back for weeks and months, with an arm or leg or hip in a complicated apparatus, and wonders if he is ever going to have a good arm or leg again, he loses weight and muscle and red blood, and pie or anything else that tempts him to eat helps to build new cell tissues as well as new courage.

In the recreation hut, Red Cross women fur-



Fig. 6. Evacuation tent. Outgoing patients were checked out on the records and made comfortable for the journey.

nished entertainment and games and writing material and human sympathy, and the doctors and nurses and corps men and social workers all pulled together with one definite object in view—to heal each wounded soldier as soon as possible, to send him back to the fighting line if it could be done; and, if that were not possible, to send him home in the best condition they could.

Someone who saw the hospital at Auteuil, and

its surgeons and nurses and patients said: "The names of the horses are washed off the betting boards, but the race course never had so many thoroughbreds on it as it has now."

#### American Nurses in the Service de Santé

The Service de Santé Militaire is a department of the French Ministry of War, and directly controls all care of sick and wounded soldiers, all military hospitalization and military sanitary service. The administration of the Service de Santé is in Paris; different zones and war sectors are in charge of the inspectors general of the Service de Santé, who are responsible to the central administration in Paris. The service of the American nurses for the American soldiers



Fig. 7. They haven't another thought in the world. Cards are among the most efficacious distractions of the wounded men.

in French hospitals is known as the "Service of Professional Aid to the Service de Santé."

The first attempt at this sort of service was made in the latter part of 1917 when four American Red Cross nurses were sent to a French hospital in Soissons, after a report had been received that American wounded were there.

As the number of American ill and wounded in the French hospitals increased, it became evident that in spite of the kindness and care given to our men by the hospital surgeons and nurses, our men were not doing well. This was due to the fact that neither the American soldiers nor the French personnel could understand the language of the other, and to the differences in American and French food, medical treatment, and nursing. The loneliness and depression of our men under these circumstances naturally retarded their speedy recovery.

After a conference with the medical inspector of the region where American troops were in French formations, an agreement was made with the bureau of hospital administration of the American Red Cross, whereby American nurses and French-speaking American nurses' aid might



be placed in French hospitals to care for the ill and wounded of the American army. The request for such service was to come through the surgeon-in-chief of the American division. Later, when the need for the service rapidly increased, the arrangement was enlarged upon, through the courtesy of the inspector general of the French army, to allow this plan to cover all of France.

A definite agreement was signed between the American Red Cross and the Service de Santé, which included rules to govern the situation, and orders were sent to the médecin chef of every hospital of the service in France to notify the office of the central headquarters in Paris of any ill or wounded Americans either received or about to be received and also to notify the same office when the service of the nurses were no longer needed.

All nurses sent into the army zones were militarized nurses and carried Red Cross Workers' permits. The American nurses were under the orders of the médecin chef of the hospital but were not responsible to the infirmières of the French service. This ruling was made necessary because of the essential differences between our system and the French system of nursing. Our



Fig. 8. Pipe smoke and American Beauty roses bring something like a home atmosphere into the days of this wounded doughboy.

hospital training and discipline and order of seniority among nurses are not known in France. Nurses in French hospitals are either volunteers or women who have had very little training, and it would have produced an impossible situation to have placed our nurses under the charge of the infirmières.

When a wire was received by the Service de Santé in Paris that American nurses were needed, that office notified the American Red Cross. The bureau of hospital administration through the head nurse of the personnel assigned to the Service de Santé, then sent a team, consisting of one graduate Red Cross nurse and one French

speaking nurse's aid, to answer the call. Several of these teams were sent if the need was indicated. The French authorities then authorized the service and travel permits and provided transport to each nurse and aid, and the call was answered in a very few hours.

This practically covers the official information on the matter. From the human standpoint, however, it means this: American mothers and wives and sisters whose men were ill, or wounded or died



Fig. 9. Mexican and Indian Americans receiving entertainment outside an American Red Cross recreation hut.

in French hospitals may know that, wherever possible, the American Red Cross followed them, that American women, who spoke their own language, cared for them, and that food and clothing were given them by the American Red Cross, and that everything which was possible to do was done to help their recovery, and, when that recovery was impossible, to bring the comfort of their own people to smooth the way for those who gave their lives to the cause.

I encountered many instances which go to show the wonderfully fine and patriotic service given by these women in the Service de Santé, one of which happened when I first arrived in Paris. I



Fig. 10. Portable sterilizing plant.

was standing one evening in the front hall of our Red Cross nurses' pension, when I heard a taxi drive up, and then two girls entered. They were in trench coats and caps, loaded down like pack mules, dirty, and so exhausted that their eyes looked like burned holes in a blanket. In spite of their appearance they seemed very much alive and happy. Everything was a romance to me at that time, and I gladly retired to their rooms to help a nurse who knew them to get them some tea, and listen to their adventures.

This is the story: They had been sent out on a *Service de Santé* call, up behind the lines somewhere. The French hospitals are right along the lines of communication. To get there, they had to travel a good part of the night in dirty coaches crowded to suffocation, and then by camion through the intense darkness, and then into a crowded hospital with no light visible. There were two hundred American wounded besides many hundred French.

So they just went to work and helped and did the best they could, and before forty-eight hours were gone quite a lot of our boys had gone west. They stayed five days, working from 6 a. m. till 2 a. m. of the next day, and then for a few hours would cling together in one bed in the barracks to get what sleep they could, which never was much, as the Boches came over every night at some time or other. Just the night before they came in, a bomb had shattered the window of their room and killed the rats in the wall. They were called back to Paris because our men who had lived had all been evacuated to base hospitals. They would get a few days' rest and then go somewhere else where they might be needed.

These are extracts of a few of the letters received by the head nurse of the *Service de Santé*:

"Arrived safely. We are filling the gap between the charming ladies who care only to help the surgeons with the dressings, and the scrubwomen. We have been scrubbing off the trench dirt and blood that has clung to the boys for three weeks, and we rub backs and make gruels and milk-shakes. There is a most devoted *soeur* here. She comes on duty at four in the morning and stays until ten at night."

"Envoyez de suite, deux infirmières à ———. 200 Américains malades. (Send at once, two nurses to ———. 200 American sick.) (Copy of a telegram.)"

"Yesterday was the Fourth of July, and we had a grand fête at A——. The children of the schools came and decorated the beds with small flags and bouquets of poppies. They had made for each American soldier a linen case to hold letters with an emblem on it. They brought cigarettes and cakes and wine, too. We cleared the beds away in one of the wards and set a table with real tablecloth and napkins, and a beautiful bowl of roses, all for the boys who could sit up to eat. The *préfet* furnished the dinner. The *préfet* himself and the *sous préfet* and the *maire*, too, all came. We had roast and potatoes, chicken and mayonnaise and cookies and champagne, a fine meal."

Our little Italian boy voluntarily prepared a toast which we translate. The *préfet* was so touched by it he asked for a copy to keep.

"To those present who represent the grand French republic—We, the Americans present, on the great Day of Independence, wish to express our hearty thanks to the people of this country so brave, and especially to the people of A——. Kindness has flowed in abundance by the people of A—— by the sisters and the doctors of the hospital. We, young Americans, have come from across the sea, leaving everything behind us, but with smiles lighting our countenance. We come with determination. We come to do for France what Lafayette did for America over a century since. We come to battle by the side of our brave ally, the French soldier. We appreciate the courage and incomparable bravery of the French soldier."

"One hundred U. S. A. soldiers ill. Twenty with pneumonia. Please send help if possible." (Copy of a telegram.)

"Here we are at ———. We have worked night and day since coming. Were both terribly tired from the barrage we had been under. It was impossible to sleep at all during the attack at ———, and it is impossible to get much sleep here. The sights are terrible. The boys are all awfully sick, as only the dying and seriously wounded are kept here. We have no hopeful cases. Miss L. gave out completely today and I am not much better. It is getting hard to hang on."

"There are thirty-one patients here. We have inaugurated a regular system of work and sports for the carriers and convalescents. The Red Cross has been very good to us. The clothing they send gives us a chance to keep the men cleaner than would otherwise be possible. We hope to get extra food for the men from the American stores, and have already bought jam and sugar for their breakfast and ours."

"One of our French *infirmières* has been killed and the other one is on permission, so my official title for the moment is *infirmière major*. We have one very sick little Italian who calls me *mama*. I am buying fruit and chocolate for him with Red Cross money. There has been no bombardment for several days now and we are beginning to sleep in our own beds again. While the moon was full, every night there was a procession of wheelbarrows loaded with beds and babies, hurrying to get a good place in the *abris*."

"Will you send some cigarettes and chocolate, and prunes or jam if you can? We are away from everything here. One patient in particular, constantly begs for cigarettes, and I have none to give him. Could you send some comfort bags, too? These boys are all badly wounded, and it will be a long time before they can be moved to an American hospital. They were all put off here because their condition was too bad to let them go on."

"No lights are allowed to show here. There were ten of us in one carriage. We faced the blackest darkness I have ever seen. The only way we knew we had reached a station was because we stopped. Then heads appeared at windows asking the name of the station. Then if it was ours, we stepped out into the inky darkness."

"We reached the hotel to find the outer door chained and padlocked. Nothing could be made out in the blackness. We went on and finally found another hotel and a room. The next day I found that the hotel where I had first applied had not a pane of glass left in the windows, and another one where I had planned to inquire had nothing left of it standing but its outer walls."

Some of the nurses have found all sorts of living quarters awaiting them. They were often placed in the first vacant barracks. One group, upon awakening after a night of travel and arrival in pitch darkness, found chickens roosting on the foot of the bed, and rabbits sleeping comfortably under it. Another group were kept awake by prowling rats, and were more greatly surprised when morning came to find Chinamen sleeping in the same barrack. Usually, satisfactory arrangements were made the next day.

The nurses in almost all cases were received with the greatest courtesy and consideration by



the French authorities. The food varied with the hospitals. In many cases the nurses were obliged to supplement both the food for their patients and for themselves by buying extra supplies. Extreme cases were known where our nurses were placed in hospitals where the diet consisted for weeks and months at a time of boiled horse meat, lentils, mouldy bread, and sour wine with an occasional bit of cheese.

The greater part of the nurses and aids served under all circumstances of danger and discomfort with the greatest cheerfulness. Their service

to our men from home who were handicapped in their recovery by their surroundings was invaluable. In many cases it savored of a genuine heroism. There was rarely an instance where the *médecin chef* and the French authorities did not view their leaving the hospital with the greatest regret because of their kindness to the French soldiers as well as to our own men. The American nurses who served in the *Service de Santé* proved themselves capable and adaptable and lovable, and left a warm spot in the hearts of the American soldiers and the French soldiers alike.

### FROM OUR FIELD EDITORS' NOTEBOOKS

#### A Hospital Where Detail Counts—Every One Chosen With An Eye to Economy and Efficiency—Dental Department Shortens Patients' Stay in Hospital

##### Hale Hospital of Haverhill, Mass.

The Hale Hospital of Haverhill, Mass., is now in its thirty-second year and is steadily growing under the leadership of its able superintendent, Miss Emma A. Mortimer.

Aside from the contagious hospital (a modern, well-equipped building, accommodating twenty-five patients), which was turned over by the city to the board of trustees of the Hale Hospital in 1914, the hospital consists of four buildings, connected by a covered passageway. A fifth building, which will accommodate private patients, is being constructed and will soon be ready for occupancy.

The Hale Hospital is fortunate in having an architect who was painstaking in working out details of construction that make for cleanliness, economy of effort, and stability. Much of the older section of the hospital has undergone remodeling and rearrangement, and everywhere a discriminating observer sees that careful thought preceded action. Even the nosing of the stair tread wasn't too small a matter for careful consideration, and rubber instead of metal nosing was installed. It grips the shoe as one descends and is noiseless. All wash bowls and sinks stand 3 inches from the wall. In new hospital buildings, of course, this is not uncommon, but it shows careful planning with an eye to cleanliness.

In the utility rooms the walls are painted for a distance of 6 feet 6 inches from the base, with pearl gray hard enamel paint instead of with a flat paint and are consequently easier to keep clean. Wooden partitions are used in the toilets and utility rooms and the marbloid of the floor is carried up on both sides of the partition about 6 inches to protect the wood against inevitable rotting from the water of scrub mops. It forms a cove base, moreover, instead of a right angle, thus preventing the ready accumulation of dirt. The medicine-closet sinks are so constructed that they can be cleaned with one sweep of a damp cloth.

A great deal of thought was put into the equipment and arrangement of the diet kitchen. Every piece of equipment is placed with a view to rapid work, the elimination of every unnecessary movement, and counter currents of action. The soapstone sink, placed 3 inches from the wall, with a shelf on each side, is just to the left of the entrance, so that soiled dishes can be deposited in it just as soon as the room is entered. After being washed, they


can be placed with no needless steps on the shelves just to the right. The height, width, and capacity of these shelves are carefully determined in order to secure the maximum of effective working space within a given area. The dish closet is 7 feet high and allowed to hold only the things in constant use. High closets, with upper shelves hard to reach, offer temptations to make them clutter holes.

The new operating room has been built just back of the old one, which is now used as a vestibule for the operating suite. The terrazzo floor is carried up the walls 5 feet 6 inches and is a delicate bluish gray. The surgeons have a pleasant room in which to foregather, with nearby shower baths and lockers.

##### The Dental Department of the University Hospital, Minneapolis

The University Hospital has a dental staff and a dental nurse, and all patients who come into the hospital undergo examination for the condition of their teeth. The nurses in training rotate through the service, just as they do through the surgical, the obstetric, and all the other departments. The dental nurse in charge does much toward putting the patients' mouths in better condition before the dental resident sees them. The patients themselves become much interested, particularly when they are able to observe improvement in their own condition, and it is the aim of Dr. Grey, in charge of this work, so to educate each patient, that he or she will not only practice dental hygiene on going out but will be a missionary to spread the lessons learned in the hospital.

One of the striking features in connection with this service is the enthusiasm of the members of other departments for the results of the dental work. Dr. S. Mary White, of the medical staff, believes that attention to diseased teeth shortens the average stay of patients in hospital by 15 to 20 percent—an almost unparalleled contribution to hospital efficiency. The seriousness with which all connected with the dental service take their responsibility is another noticeable thing. I might add that a third outstanding fact is the kindness and courtesy shown to the patients. Indeed, many patients paying extravagant prices for private suites and nurses might envy the patients in these wards overlooking the beautiful heights of the Mississippi River.



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Contributors, subscribers, and readers will find important information on advertising page 42.

### The Training of Medical Hospital Superintendents

What motives or what processes of thought influence medical men to take administrative hospital positions? Do many of the younger men who enter medical college think, when embarking on their scientific course, that it is to lead them into a life work of hospital management? Yet an increasingly larger number of medical men each year go or drift into administrative work. Is their action the result of choice or accident?

The industrial and business worlds have by experience developed definite composite character standards for successful executives. The basic requirements of forcefulness, clearness of mind, quick decision, and firmness apply as much to hospital superintendents as to managers of industrial plants or of business organizations. Fundamentally the problem is the same: to produce the maximum amount of service at the minimum amount of cost.

The reservoir of men from which the business world has to draw is very large. The hospitals are restricted to a comparatively small group, first, because they cannot compete with business concerns in payment of compensation; second, because they require of their managers a considerable amount of technical knowledge which is very seldom possessed by persons without a medical education. Although many lay persons have

proven themselves to be excellent hospital superintendents, the modern tendency is unmistakably toward limiting the field to graduates of medical schools. Their "right to monopolize" hospital management is on par with the "right" of engineers and chemists to manage industrial plants. But right involves responsibility, and this leads to a consideration of the problem of training medical men for administrative duties.

Prior to our entrance into the Great War some of our medical schools adopted the five-year course. The application of the new curriculum was postponed on account of the war exigencies. The post-bellum period of reconstruction will give added momentum to the movement for a prolonged medical course. The majority of our first-class schools will add the fifth year and will devote it chiefly to bedside instruction in hospitals. Students desiring to devote themselves to a career of laboratory research will probably be allowed to utilize the additional year in the laboratory instead of in the hospital wards. Likewise, those wishing to select the field of public health for their life's work ought to be given the opportunity to specialize in studies that will fit them for their selected tasks. Is it not feasible to establish a special course for those who would wish to fit themselves for the duties of hospital managers? The very existence of such courses would act as an axis of crystallization for those students who feel more or less indistinctly a preference for executive work in hospitals over the practice of medicine.

The courses offered would embrace such subjects as business management, efficiency tests, the science of accounting and finance, the understanding of values in the many kinds of goods in which the hospital is interested, and then, of course, instruction in the problems of hospital management. The last-mentioned will be conducted by successful hospital administrators, with whom arrangements could be made to teach the students at the hospital and put them to practical tasks. One year's study will not, of course, develop young men into mature executives but it will serve two purposes: (1) it will eliminate those who are unfit for executive positions and save them future failure; and (2) it will give an opportunity to those with executive abilities to train their native faculties for the successful discharge of their duties in the future. Many hospitals will be glad to avail themselves of the services of these partially trained graduates who would be more valuable to them from the very outset than persons who had had no administrative training whatever and are unfamiliar with hospital problems. At the same time the young



graduates will be enabled from the beginning to earn a definite salary and that in a position which will lead to further advances along those lines in which they desire to specialize.

The suggestions made in this article are offered solely in the hope that they will promote a discussion of the subject. It may be that the suggestion of linking hospital management courses with medical college curriculums is not practical; it might perhaps be better to establish training schools in connection with some of the hospitals, just as we have training schools for nurses. The subject, however, is a vital one and deserves careful thought and discussion.

E. H. LEWINSKI-CORWIN, M.D.

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### The Hospital and Its Board of Trustees

Every hospital that wishes to maintain ideals of efficiency or service to the public, every hospital that has anything to ask of the public, needs to consider well the work and the relations of its board of trustees. Are the trustees interested? Are they doing their share? Do they even understand the service which the hospital is rendering or should render to the public? If not, why not?

The duties of the trustees have never been standardized—scarcely even clearly defined. In some institutions, owing to this lack of definition, the relations of the superintendent and the board are antagonistic; in others, they are negative. The work of the hospital is hampered in the one case by friction, in the other, by the deadweight of an uninterested and indifferent board.

This condition is one of transition. Whether or not the trustees, in any particular case, realize it, they have a responsibility—say rather *the* responsibility—for the conduct of the hospital. This responsibility does not mean, of course, that they should interfere with the superintendent or the staff in the performance of their respective duties. All trustees realize that it is not their function to prescribe the medical and surgical treatment to be given the patients in the institutions, and most of them realize that it is just as little their place to give orders to the housekeeper or the steward, or to limit the superintendent by petty, nagging rules and interferences.

That the trustees should leave the medical and administrative work to experts is sound doctrine; but this is not the end of the matter. After all is said and done, the trustees are trustees; they, and not the medical staff, and not the superintendent, are responsible to the public for the efficiency of the institution and the character of work done in it. It is possible to dodge board meetings, but it is not possible to dodge responsi-

bility for what is there done or left undone. Some day this is going to be recognized, and dummy hospital trustees are going to be just as sternly called to account as dummy bank directors have already been. When the searchlight shows up conditions by which the public health and safety is endangered in the very institution which is supposed to exist for the purpose of protecting it, the trustees are not going to escape accountability by pleading that they "supposed" everything was all right.

But, if the superintendent is responsible for administration and the staff for treatment, what is left for the trustees? The highly indispensable function of seeing that these and all other responsibilities are properly met. There used to be—and perhaps there still is in some quarters—a feeling prevalent in the medical and administrative staff, that a board of trustees, except so far as it was necessary for the raising of money, was a concession to convention, which made itself an active nuisance in proportion as it took itself seriously. The best board of trustees was the one which approached the nearest to being a nonentity. A superintendent who knew his business should not be called to account by a non-expert body like a board of trustees; no more should a competent medical staff.

The tendency of the expert to resist and even to resent lay control is natural and perennial; it is justified wherever the layman presumes to pass judgment on technical method; it is not justified where the layman asks for an accounting on results. The expert, be he or she a cook, a chauffeur, a lawyer, a physician, or a nurse, is the servant of the lay public or some portion thereof, and, as such, is answerable for results. We may not be able to instruct our cooks how to make a pudding, our chauffeurs how to run an automobile, still less our lawyers how to handle our legal business and our physicians and nurses how to handle our cases of illness. We are, however, justified in demanding of any of these experts that they continuously show us proof of their competence. It is good for them; it is good for any of us to know that we are thus continuously held to accountability—that our good work is appreciated and our bad condemned. And, while a layman is no more capable of judging the professional competence of a physician by watching his work than a depositor is of judging the solvency of a bank by observing the cashier at his work, we are indebted to a professional body, the American College of Surgeons, for emphasis on the fact (previously pointed out by E. A. Codman) that physicians and surgeons, like everyone else, can and should be expected to render an

account of the results of their work, in terms that can be understood by the non-expert.

Now, to go back to hospital boards; the duties of its members are defined by their title. They are trustees of the public for the safety and welfare of every one within the walls of the institution. Are the residents exposed to the danger of fire? If they are, the trustees cannot escape responsibility by pleading that the building was erected before their time, that they supposed the architect had provided against fire, or that it was the superintendent's duty to see that no inflammable material was exposed to the danger of sparks; it is their duty to know. Are the patients receiving proper medical and nursing care and proper food? It is the duty of the board of trustees to know that nothing is neglected that conduces to the welfare of the patients in the first place and of the other dwellers in the hospital in the second.

Nor does this mean that the trustees are to stand over the administrative and medical staff as policemen. Rather does it mean that they are to strive to understand the work of both and to encourage them by appreciating what is well done. As trustees, stewards for the public, they can not remit their insistence for an accounting from those responsible under them; but this insistence need not and should not imply distrust. Where the true principles of hospital organization are understood, it should mean the friendliest and most harmonious cooperation among board, administrator, and staff. In this connection, Dr. Freiberg's article on this subject on page 15 may be read with profit.

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#### The Education of the Board of Trustees

We have outlined in the preceding editorial some of the duties and functions of the hospital board of trustees. If, in any given case, the board is not fulfilling these duties and functions, what is the reason? Generally speaking, lack of insight into the true relations of board and hospital. The board is usually drawn from the best elements in the community. All that the trustees need, to fit them to be the formulators of wise policy and the valued advisers of the superintendent in its execution, is education in hospital principles. How shall they obtain this education?

In the first place, of course, they must learn, through faithful attendance on board meetings and through contact with the superintendent and staff, their own institution and its needs. This is not enough, however; they can not know their own hospital adequately if it is the only one they do know. For the broader view necessary to en-

able them to judge their own problems in the light of the experience of others, there is nothing like attendance on hospital association meetings—the hospital association of their own state if the state has one, but in any case and by all means, the American Hospital Association. At least one member of every board of hospital trustees ought to attend every meeting of the national hospital association. If he attends as one of the accredited delegates of his own institution, so much the better; and, by the way, this is a good opportunity to present again the advantage to the hospital of institutional membership in the American Hospital Association.

It would be highly desirable if every institution in the United States which is eligible would take out institutional membership in the American Hospital Association, and, furthermore, take full advantage of the privilege of being represented by three voting delegates. If each hospital were represented at the next meeting by its superintendent, one member of the board of trustees, and one member of the medical staff, the profit to each institution in broadening the point of view of all three elements in its organization—in obtaining light from three angles on its problems—would be almost incalculable.

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#### Progress of the Standardization Work of the American College of Surgeons

The "News-Letter Concerning Hospital Standardization," recently issued by the American College of Surgeons, and quoted on page 45 of this issue, gives an interesting review of the results thus far accomplished by the college. The reports made on individual hospitals during the survey of seven hundred institutions conducted by the college indicate an exceedingly valuable and instructive piece of work. The publication during the current year of the full report of the results of these visits, with classifications of the hospitals of one hundred beds or over, is promised.

The reaction of the hospitals toward the campaign of the college has been most interesting to observe, and no less interesting has been the reciprocal effect of this reaction on the campaign. The selection of the name "hospital standardization" for a movement directed toward reform in medical and surgical practice was, at the outset, unfortunate. The principles of "standardization" set forth by the college are so indubitably and irresistibly right that it is impossible for any candid person to refuse assent to them. Yet, while the principles are accepted, the name "hospital standardization" has aroused an undercurrent of



somewhat resentful misunderstanding—among the stronger hospitals, because of the feeling that they were to be “standardized” on a basis which took no account of a large and essential portion of their work—among the weaker institutions, long dominated by their staffs, because of the impression that they were being used as whipping boys for the sins of their masters. Probably only the exceptional tact, vigor, and skill with which the proposition has been presented to the public and the hospitals has brought it within measurable distance of the success which fundamentally it deserves. The present attitude of hospitals toward the movement is perhaps reflected in a resolution, presented at a recent hospital meeting, where the question was discussed with keen interest and considerable frankness, that the organization endorse “the standardization of *medical and surgical practice in hospitals*” (these words were emphasized by the mover of the resolution) advocated by the American College of Surgeons.

The greatest success of the campaign has apparently been among the larger hospitals—at least, this might be inferred from the fact that the college has not signalized any intention, as yet, of publishing statistical results among those of less than one hundred beds. Among the larger institutions, there are several which have put the standardization program into effect with results which excite well-founded enthusiasm. Little or nothing is said, however, about what the smaller hospitals are doing. Indeed, those administrative heads of small institutions who earnestly approve and desire to follow the ideals set forth by the college, have been somewhat disappointed by its failure or omission to give serious consideration to the problems which seem so trifling to outsiders but which are after all, vital to the hospitals themselves. The college, in their view, points out the steep and thorny way to heaven, but, when asked, “What about bread and butter on the road?” replies, “Trust in the Lord,” or words to that effect.

In most of the smaller communities, at present, the dominant force in matters pertaining to health and the care of the sick is not the hospital, but the local medical profession. The hospital, if it is not owned by a local surgeon, is usually, in one way or another, controlled by some member of the local profession. Under these conditions the superintendent, in order to enforce the formula of righteousness prescribed for the salvation of all hospitals, must possess either a burning faith which enables him or her to disregard the sordid question of tomorrow’s dinner, or the secret of making soup from cobblestones.

That the college has not yet brought the New Jerusalem down to earth should by no means be reckoned as failure. On the contrary, it has done a wonderful piece of work. It has presented with irresistible force to the public, to the medical profession, and to the hospitals certain ideals to which they dare not openly refuse allegiance. It has even been able to demonstrate their practicability in certain classes of institutions. If it has not yet solved the problem of the small hospital—well, the possibilities of the small hospital are still uncharted and unsounded seas. That so much has been accomplished, in the face of a rather heavy initial handicap, speaks eloquently for the brilliant propaganda conducted by Mr. Bowman, the director of the college, and Father Moulinier, president of the Catholic Hospital Association. Indeed, it seems possible that the future may show results as yet undreamed of.

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#### An Interesting Experiment in the Construction of a Maternity Ward

Extensive experience in maternity work has led Dr. Alfred Baker Spalding, of the Lane Hospital, San Francisco, to believe that the unbroken quiet of the maternity ward may have its disadvantages. The convalescence of the mothers may be retarded by anxiety about their babies, invisible and inaudible in the nursery. Furthermore, the mother learns nothing about the proper care of her child from what is done for it at the hospital. Dr. Spalding believes that it is a good thing for the mother to be able to see her baby, and he has therefore partitioned off one corner of his maternity ward at the Lane Hospital for a nursery. A further evolution of the same idea is seen in the plan of the maternity pavilion at the Cottage Hospital of Santa Barbara, described on page 14 by Mr. Winsor Soule, the architect, who is also a director of the institution.

As will be seen by reference to the plan, the nursery has been placed in the center of the ward, from which it is divided by double glass partitions. At one end is the babies’ bathroom, so placed that the mothers can see their children being bathed, and at the other the nurse’s station. The glass partitions between the nursery and the ward are intended to muffle but not entirely to deaden the sounds, as it is part of the mother’s education to learn that the baby must not be fed every time it cries.

An innovation so radical as this inevitably arouses inquiry. Among the first questions which come to mind are these: Is the provision for direct sunshine and air in the nursery adequate? And, since the women lying in bed cannot see the babies in their cribs, does the proximity of the

nursery to the ward compensate for the disturbance of the mothers by the crying of the children at night?

In any case, the experiment is most interesting, and the results should be instructive. It would be instructive, also, to know in how many other hospitals an attempt is made to educate the mothers, before they leave the hospital, in the care of their children, and the means employed.

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#### A Carefully Studied Plan for a Tuberculosis Sanatorium

Like the other plans for sanatoriums erected under the guidance of the Minnesota State Advisory Commission, the plan for the Riverside Sanatorium at Granite Falls, described on page 17, is worthy of careful study. The arrangement and detail of the various parts give evidence of the consideration given to the comfort and convenience of the patients and to economy of management. The cubic-foot costs given are low, by the way, but the cubic capacity is high, making the cost per bed relatively high—\$2,006.

An interesting criticism made of these plans is worth quoting, for the sake of an instructive reply received from the commission. The critic writes:

"It is treading on thin ice for anyone to question the dicta of the Minnesota State Tuberculosis Advisory Commission, but it does seem that the large percentage of ten-bed wards (thirty beds out of forty-five) needs some explanation. The experience of almost every community has been that the public sanatoriums receive a large majority of advanced cases, a few moderately advanced, and an occasional incipient. Their patients, therefore, will require a long period of treatment, in the sanatoriums if they are to be benefited. Most sanatoriums have found that patients will not stay for three to six months except under the most favorable conditions, and that the small ward is imperative if the institution is to be successful in its purposes. It is hard enough to keep two people together for months in total idleness, but the task of keeping ten contentedly together in enforced association for any length of time appears superhuman."

Dr. Robinson Bosworth, executive secretary of the State Advisory Commission, replies:

"While it is true that public sanatoriums receive advanced cases in a large majority, it is not our experience that necessarily these advanced cases must be in private rooms. We do not place our patients in private rooms because of the stage of the disease *per se*, but because of the fact that, irrespective of the stage of the disease, they may do better for special reasons or may be less objectionable to other patients, or may receive special treatment needed which could not be so well accomplished in the open ward with other patients. It is our experience that patients prefer company. We see this shown conclusively when a patient is moved from a ward to a private room. We have endeavored to provide 20 per cent of the capacity of all our sanatoriums in rooms, 80 per cent in wards. The comment made in the criticism that most sanatoriums have found that patients will not stay from three to six months except under the most favorable

conditions, I am pleased to answer from last year's monthly report of the institution described in the article; the average length of residence was six months, so that its conditions must have been fairly satisfactory."

Incidentally, apropos of the critic's reference to the difficulty of keeping "people together for months in total idleness," it may be mentioned that the commission is employing an occupational director, whose work, though only just begun, seems likely to be very successful. An abstract of a paper by Miss Beatrice Lindberg, the director of the work, appears in the report of the recent meeting of the Minnesota Hospital Association, p. 53.

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#### An Asepsis Number of The Modern Hospital

The world has come a long way since Joseph Lister first presented his discoveries in asepsis to a bored and inattentive audience in the theater of a London hospital, but it has gone ahead on the basis of the same theory which, once Lister's ideas were accepted, reduced the average mortality from operations from 40, to 2 or 3 per cent. Five papers on asepsis make this issue of THE MODERN HOSPITAL noteworthy. The first, Sir St. Clair Thomson's account of Lister's years of struggle and discouragement and his final triumph, is something of a revelation to a younger generation to whom asepsis is the commonplace of hospital practice. The second, Dr. D. L. Richardson's paper on "Aseptic Nursing in American Hospitals" (the third in his series), deals with efforts to avoid cross-infection in the hospital management of contagious diseases. The other three papers—"Present-Day Meaning of Surgical Asepsis," by Dr. A. E. Hertzler; "What Is Meant by Surgical Asepsis?" by Dr. A. Nelken, and "Fighting the Bacteria That Cause Infection," by Dr. F. J. Hall—are practical discussions of technique, common errors, and effective precautions, which should prove valuable to the administrator who wishes to understand the principles which should be followed to avoid what Dr. Nelken calls "that purgatory of the conscientious surgeon [and the self-respecting hospital]—infection following a 'clean' operation."

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#### A New Hospital Bulletin

The Catholic Hospital Association has decided to issue a bulletin in which the proceedings of its meetings will be published together with news of the activities of Catholic hospitals in Canada and the United States, and other timely matter of interest to Catholic hospitals. The details of the publication are to be formulated by a committee appointed for this purpose. Whatever form the proposed bulletin may take, we are glad to extend to it a hearty welcome.



## THE LATCHSTRING OUT

CAPT. DR. RENÉ SAND of the University of Brussels pulled THE MODERN HOSPITAL latchstring on a recent visit to Chicago. Dr. Sand served during the war in a hospital at the front, and, with the return of peace, his interest is centered in the reorganization of medical education in Belgium, and particularly in the extension of industrial and social medicine. A new interest in industrial welfare has been created in Belgium but, of course, the whole plan is handicapped by the devastation of five years. In an article entitled "Suggestions for an American Foundation in Belgium," appearing in THE MODERN HOSPITAL for May, on page 317, Dr. Sand described his hopes for this work and the means by which America may serve it.

One particularly interesting and inspiring phase of this work, described by Dr. Sand, is the assistance and support given it by the unofficial government of Belgium during the years of the German occupation. This government had no authority, but everybody obeyed it. Whole communities which conducted affairs instituted state medicine, and everyone had free medical service.

Dr. Sand is an alert man who has caught the new vision, and he promises to be an important figure in Belgian reorganization. He acts as medical advisor of the Ministry of Labor in addition to attending to his duties in the medical school.

CAPT. JOSEPH PURVIS, lately chief of the section of hospital administration service, intermediate zone of the American Red Cross work in France, has just returned and is about to take up civilian hospital work again. Captain Purvis says that it is difficult in this country to form any idea of the extent and value of the work performed by the Red Cross, both for the armies and for the French civilian population. At Lyons, where Captain Purvis was stationed, the Red Cross is carrying on extensive work for tuberculous women and children.

DR. ROBINSON BOSWORTH, executive secretary of the Minnesota Advisory Commission of the State Sanatorium for Consumptives, on a recent visit to our office, called attention to the important work in the standardization of tuberculosis sanatoriums then in contemplation by the American Sanatorium Association, the National Tuberculosis Association, and the Mississippi Valley Conference on Tuberculosis. Since that time, committees from these three associations have met and made an exceedingly important report and suggestions which will be found on page 58 of this issue. Dr. Bosworth has favorable results to report from the work of Miss Beatrice Lindberg, industrial worker for the commission, who is employed to make the rounds of the fourteen county sanatoriums under the commissioner's jurisdictions, in order to instruct the patients and interest them in occupations.

MISS MARGARET J. ROBINSON, who has been with the French Commission of the American Red Cross at Paris headquarters, and whose articles on French and American hospitals in France have been appearing in THE MODERN HOSPITAL, has just returned to this country. She is enthusiastic about the work accomplished by the Red Cross for the American Army and the suffering people of France. The work of the Red Cross will be continued through the League of Red Cross societies, which, when it reaches its complete function as planned, will probably be the greatest single organization for human betterment which has been conceived. Miss Robinson has recently completed, under the supervision of Major A. H. Garvin, chief of the department of health and the Bureau of Tuberculosis of the American Red Cross in France, a

definite study—perhaps the first of its kind—to determine the amount of hospitalization needed in communities of a definite population. A typical department of France was selected for this study.

## THE FREE PUBLIC HOSPITAL MOVEMENT\*

## The Canadian Prairie Provinces of Saskatchewan and Alberta Enact Advanced Hospital Legislation

A very strong movement for free public hospitals, especially for the rural districts, has been sweeping the West. There has been an increasing demand that provincial governments assume a greater measure of responsibility for public health. This has, no doubt, been brought about by what has been accomplished by the military medical departments. It is urged that if a complete medical and hospital service can so improve conditions among soldiers, an equally complete service for civilians would have the same result.

Each of the prairie provinces, in response to this agitation, has enacted legislation. Saskatchewan and Alberta have passed hospital acts providing for public hospitals to be controlled and financed by the taxpayers of the districts which they serve. The Alberta act is considered the most advanced measure enacted anywhere in Canada. It recognizes more fully than the Saskatchewan act the primary responsibility of the government, and provides a scheme of organization closely paralleling that for education, in which the government assumes the initiative in all organizations. The Alberta act lays the foundation for a system of hospitals as complete and gratuitous as the public schools. It is based on the principle of the direct responsibility of the state for maintaining the health of each and every citizen. The office of minister of municipal affairs is combined with health matters. Alberta has paved the way for a revolution of the present methods of safeguarding health; it provides the minister of health with adequate machinery to carry out a progressive democratic policy for complete nationalization of health within the boundaries of the province.

The act provides for alternate initiative by the minister and the ratepayers. This prevents action by the government before the ratepayers of a given district are ready for action, but gives the minister full general supervision over the administration by the local boards of each district. The minister establishes the districts; the ratepayers, by petition, set the machinery of the act in motion, the district board then assumes the executive, establishing a hospital having the benefits of provincial architects, medical staff to advise them as to plans, costs, etc., and the scheme is submitted to the ratepayers. Individual ratepayers have access to the Board of Public Utility Commissioners for redress for a wronged minority. These commissioners also adjudicate on disputes as to site when the various sections of the district fail to agree. Formerly many municipalities had endeavored to combine by mutual agreement to form hospital districts, but, with the exception of Lloydminster, the plan failed owing to dispute over sites, the inertia of one municipal council or the hostility of another. By the present act it is believed Alberta will be much better served, as many local improvement districts would have been left isolated owing to financial inability to participate in the organization of the district to which it naturally belonged. The Alberta act differs from the Saskatchewan act in that the latter does not provide for such extensive government initiative.

\*From the Canadian Medical Association Journal.

While the Saskatchewan act permits municipalities to unite to form hospital districts, the Alberta act provides that the government shall lay out suitable districts without regard for municipal boundaries and having regard only for the necessities of the hospital. It is designed to enable the government to progress in line with the progress of public opinion, and it leaves to public or voluntary initiative only as much as is absolutely necessary to preserve local autonomy.

#### HOSPITAL STANDARDIZATION INVESTIGATION BY AMERICAN COLLEGE OF SURGEONS

##### Staff Organization, Case Records, and Clinical Laboratories the Subject of Inquiry—Visits Paid to Seven Hundred Hospitals

A recent news-letter published by the American College of Surgeons contains an account of the work which the college has done and is doing to further the cause of hospital standardization, from which the following extract is drawn. The subject is commented on editorially on page 42.

"At this time, about seven hundred hospitals have been visited by staff members of the college. The reports of the visitors, together with the action taken, are recorded upon cards printed for the purpose, and are specific as to the following 'minimum standard':

"*Staff Organization*—Extent of analysis or review of professional work; regularity of meetings; reorganizations contemplated; evidence of staff team-work, research, education of interns, etc.

"*Case Records*—Data as to medical, surgical and obstetrical case records of all classes of patients treated in the hospital; methods of recording, classifying, filing, etc.; contemplated changes.

"*Clinical Laboratories*—Equipment of the laboratories; number and training of the laboratory workers and technicians; extent to which adequate laboratory service is provided; supervision given interns doing laboratory work.

"A letter to the superintendent precedes these visits, outlining its object and stating the approximate date of visit. The visitors, of course, seek first of all the assistance of the superintendents in this work. And before each visit ends, the entire standardization program usually finds its way to the local Fellows, internists, staff groups, and members of the board of trustees. The frankness of all concerned with the hospitals in stating their problems and their willingness to consider these problems with the visitors of the college are a constant encouragement.

"The following is one of the many reports made for the college by Mr. Frank E. Chapman, this report being an addition to the regular report on the minimum standard:

"The x-ray equipment is very complete with an exceptionally bright and intelligent technician on duty at all times. Volume of work is not large but the character is very good. Do not believe it is being used as much as it should be. The hospital has a technician in charge of the laboratory. Not equipped to do Wassermanns; from the conversation I had with the technician, I do not think she is equipped to do laboratory work of any kind. There is no such thing as routine laboratory work. Very little pathology is done and that only when special charges are made.

"The deplorable thing about the hospital is the general atmosphere of the place. It is a business proposition from start to finish. Pupil nurses are permitted to do special work even in the first year of their training, for which the hospital charges and collects the fee. This institution is operated in conjunction with two other hospitals of the state, all of which are on a par.

Again, the following, somewhat condensed, is one of the reports made by Miss Anna C. Phillips:

"*Capacity*—160 beds. Private charitable institution. "*Type*—Medical, surgical, obstetrical. Number interns, three. Number pupil nurses, seventy-two.

"*Staff Organization*—A loosely organized group. Regular meetings not held. Any physician in good standing may bring patients to wards or rooms. No regulations.

"*Laboratories*—Well-equipped, clean, light, laboratories in charge of part-time, trained workers. Pathological laboratory under-staffed and interns do laboratory work without supervision. No laboratory records kept which would indicate volume of work.

"*Supplementary Report*—Hospital located in quiet residential section; car line near. New fireproof building surrounding three sides of large open court gay with flowers, shrubs, etc. The low, broad lines, balconies facing the court, and the general impression of brightness and comfort, reflect definite planning and thought. Atmosphere dignified and prosperous. A sense of confusion in the wards is probably due to the numbers of doctors attending and the varieties of treatment ordered for the same types of cases. Staff has been dissatisfied with existing organization, but has found difficulty in inducing the trustees to assume responsibility regarding establishment of definite rules and regulations. The teaching in the local medical school is not strengthened by the standards existing in this hospital. Duplicate report left with chief of staff for presentation to board.

"During the current year a full report of the results of these visits will be made by the college, and classifications of the hospitals of one hundred beds or over will be published in accordance with the findings of the visitors."

#### THE IMPORTANCE OF THE LABORATORY IN THE HOSPITAL

##### It Promotes Good Medical Service—It Encourages Good Internists—It Creates Public Confidence in the Hospital

A strong plea for better hospital facilities was put up by Dr. J. M. Baldy in an address published in the *Journal of the Medical Society of New Jersey*. Just as, in a sense, the operating rooms created surgeons, the laboratory will create the internist. Fifteen years ago it was rare to find a good surgeon outside of a great city—now practically every large community has one. The development of the operating room has given him a chance to develop. Of course, too, the action is reciprocal, and it was the surgeon's demands that brought the well-equipped operating room into being. The internist is in the same position as the surgeon was fifteen or twenty years ago.

Pennsylvania's experience with laboratories is enlightening. There were not more than fifteen or twenty pathological laboratories in the whole state a few years ago; today there is not one hospital that has not a laboratory. Not all these laboratories are of the best, but all have equipment sufficient for clinical medicine, leaving out research and advanced work, and all have trained laboratory workers. In consequence a group of men is growing up who long to devote themselves to scientific work, and who are giving up clinical work and visiting the best laboratories for short courses in order to prepare for the future. "Pitiless publicity" is the means which has been most generally used in bringing hospital superintendents to recognize the necessity for installing laboratories.

Dr. Baldy also stresses the function of the laboratory as an educational feature and, in consequence, as a means of creating public confidence. "The day has long gone by," he says, "when we look upon a hospital as simply a place in which to care for the sick. . . . The education of the coming medical men, of the staff men, of other doctors in the town, and of people in the community . . . is also the function of the hospital." This aspect of the case is



very important to the public, for, as Dr. Baldy says, "without the educational feature as a safeguard, it is absolutely certain that the patient is not well cared for." He believes that the public realizes this, and that its confidence increases with the increased responsibilities of the hospital. "Any person," he says, "who . . . sees the laboratory tests that are done and the intensive study given the case is not going to have himself treated by prescription writing."

But the great service of the laboratory is, of course, that which it renders to the medical profession itself. "It is not only important," says Dr. Baldy, "it is the salvation of the practice of medicine; it is the educator of the future internist."

Dr. Baldy makes short work of the practical objections to maintaining laboratories. There will be no difficulty, he thinks, in finding the personnel to man them. Young men come out of the medical schools trained in laboratory work, and, in the small towns to which they go, find no opportunity to practice medicine as they have been taught. They will welcome an opportunity to work in an institution where a laboratory is maintained. A laboratory can be put in at the cost of \$1,000, and the hospital which is not able to afford this in order to do better work is too poor to be a hospital. A technical assistant can be secured for a moderate price, since he does not need the training which would be required to read the results of his tests.

So important has the laboratory element been found in army work that the Council on National Defense suggests for hospital interns one year in the laboratory instead of one year in the hospital. In Pennsylvania two full months' laboratory service are required of the intern in which he is to do nothing else, and no deviation is accepted from this rule.

#### A LEAGUE OF ALLIED HOSPITALS

**To Erect Hospital in Belgium To Provide a Place for Research and To Perpetuate Surgical Advance Developed in the War—A Memorial to Edith Cavell and Marie de Page**

A league of hospitals in allied countries, the chief of which will be a memorial hospital to be erected in Brussels, to the memory of Edith Cavell and Marie de Page—such is the plan which has been announced by Dr. Antoine de Page, head of the Belgian Red Cross.

The purpose of these hospitals is to perpetuate the methods of surgery which have been developed during the war and to provide a place where surgeons of allied countries may go to do research work, for which, formerly, they would have gone to Germany.

It seems particularly fitting that the memorial should commemorate the splendid lives and tragic deaths of these two women. The story of Edith Cavell, who was shot by the Germans as a spy, in 1915, has become international. During her trial before a prejudiced court and when she was hurried before the firing squad to die, she seemed to incarnate the calm, undaunted spirit of her people. And against her, who exemplified that barrier which prevented Teutonic dominion of the word, they vented their hate.

For eight years before her death she was matron of Dr. de Page's clinic in Brussels. Later she was head of the school of nurses which the doctor's wife established in the Belgian capital.

Marie de Page, who like Edith Cavell, is a heroine of the great war, went down on the *Lusitania*. Madame de Page was carrying with her from America Belgian relief funds. Her body was washed ashore on the Irish coast

and was buried on the beach at La Panne, four miles back of the Belgian lines, where Dr. de Page had his headquarters.

It is to these two victims of German warfare that the Edith Cavell-Marie de Page Hospital will be erected. The hospital, by continuing the use of the surgery which has been put into practice during the war, will be of inestimable value to surgeons from all the allied countries, who wish to do advanced research work.

A sort of reciprocal system will be established automatically whereby surgeons from non-Teutonic countries will not only be welcomed to the hospital for advanced study, but surgeons from the league will be received gladly in all the hospitals of allied countries.

A definite international organization for the league has not yet been effected. However, leading surgeons in Belgium, Great Britain and America are cooperating.

The league of hospitals, while it will always operate for the advancement of surgery in allied countries, will at the same time be a barrier against a Teutonic invasion of that surgical world. All German scientists will be barred from the allied laboratories.

Considerable interest in the international hospital project is being aroused by Dr. de Page, who is touring America with his companion, Captain Joseph Van de Velde. The idea has already been announced in Great Britain, where the cause is being promoted by Lloyd George and Herbert Asquith. They are sponsoring the British memorial for which Great Britain has assumed half the expense. This leaves the rest of the obligation for Belgium to meet. Such a burden rests heavily upon Belgium, which is bled poor by the war. It is to be hoped that America will want to help in erecting the memorial.

"I am here to express to the American people my deep appreciation of the help they have given us during the war and to endeavor to interest them in the construction of the memorial hospital which is being erected to the memory of Edith Cavell and Marie de Page."

In these words, Dr. de Page expressed the purpose of his mission to America. Besides being head of the Belgian Red Cross, Dr. de Page is professor of surgery at the University of Brussels. He bears the rank of colonel in the Belgian army, where he has seen four years' service.

Early in the war, Dr. de Page built a large hospital at Vinckem, on the Yser, six miles from the front lines. It was considered a foolhardy enterprise at the time. People said that it could be wiped out by a small German advance, but, in the allied advance of September and October, this hospital was the salvation of the Belgian army.

Dr. de Page is most grateful to the American Red Cross for their splendid cooperation not only in this instance, but in the years of assistance which they have given to Belgium throughout the war. The hospital at Vinckem was a tremendous success.

The advanced surgical methods which Dr. de Page employed here astounded the medical world. It is said that two weeks after an amputation a soldier would be walking about on artificial legs. Dr. de Page himself has declared that he knows of many cases in which men who had suffered partial amputation of the hands were at work with tools within fifteen days. He explained that the muscles which adjoined the artificial limbs were put into action before they had time to stiffen and become useless.

During his tour Dr. de Page is explaining some of the technical features of his work to American surgeons, who are interested in the international league. The interest which is being shown will do much to strengthen even further friendship between the scientific men of all the allied countries.

## HEALTH AND MODERN INDUSTRY

Conducted by BARROW B. LYONS  
Superintendent Delaware Hospital, Wilmington, Del.

### A WELL-DEVELOPED PLAN OF HEALTH ENGINEERING

#### How the Colorado Fuel and Iron Company Develops Healthier and Happier Families of Working Men and Women

"Doesn't that engine need oiling"? the visitor asked the factory superintendent.

"Perhaps it does," replied the superintendent, "but I



Fig. 1. Main entrance to the grounds of the Minnequa Hospital of the Colorado Fuel and Iron Company, at Pueblo, Colo.

haven't had time to look it over. Anyway the price of oil has gone up and it would cost fifty cents to lubricate the machine properly. I think we will just let it run until the crank shaft bearings have burned out and then shut the plant down a couple of weeks and rebuild the engine. It won't cost more than a few thousand dollars."

Probably no conversation like the one recorded above ever took place. That system of care for machinery would not be advocated even by the most ardent Bolsheviki, but in caring for men and women too many superintendents and employers in the past—and a few even at present—have followed methods little more enlightened.



Fig. 2. A glimpse through the shrubbery of the Minnequa Hospital

Disregarding for the moment ethical and humanitarian considerations, can anyone fairly estimate the economic loss involved in letting the labor force of a corporation become ill, or, what is perhaps worse, in allowing men and women to work day in and day out while suffering discomforts which render them listless, inefficient, and liable to accidents?

The service of industrial medicine and surgery in healing the sick and restoring the injured is important indeed, but much more so is its service in preventing disease, teaching hygienic living, and keeping the worker and his family physically fit.

In both the curative and preventive departments of industrial medicine, The Colorado Fuel and Iron Company, with twelve thousand men employed in its twenty-odd coal and iron mines in Colorado and Wyoming and in the Minnequa Steel Works, Pueblo, Colorado, has adopted advanced standards.

The company's medical department was founded almost simultaneously with the beginning of its operations nearly forty years ago. The department has its headquarters in the Minnequa Hospital, Pueblo. This institution for years has been accorded merited recognition as one of the most advanced industrial hospitals in the United States. The staff of surgeons at the hospital is supplemented by the services of physicians in the various mining towns. Adjacent to the steel works at Pueblo is a dispensary for the treatment of minor illness and injuries. The company has



Fig. 3. View of the Minnequa Hospital from its spacious lawn





Fig. 4. Dispensary maintained by the Colorado Fuel and Iron Company at the iron mining town, Sunrise, Wyoming

inaugurated a program of building dispensaries or emergency hospitals at the mining properties. Two of these already completed, one at the coal camp at Primero and the other at the iron property at Sunrise, Wyoming, were donated to the people of the camps by John D. Rockefeller, Junior.

At the steel works and at several of the mining towns, visiting nurses are employed. These nurses care for ill and injured men in case of emergency, but their principal function is in teaching the principles of hygienic living and housekeeping according to American standards to the wives and families of the miners. Within the past year the company has cooperated with the counties where its mines are located in employing public health nurses under the supervision of the American Red Cross.

For the benefit which he and his family derive from the medical service, each employee pays one dollar per month. The fund thus raised is supplemented by appropriations from the company. Employees are entitled to hospital treatment in case of injury or serious illness and to medical service at their homes. In the case of workmen living at the mining camps, free medical attention is also extended to their families. Hospital treatment is not furnished to families of employees free of charge, but a reduction from regular rates is made for their benefit.

More than two years ago a decided innovation was inaugurated in the shape of free dental and optical service for the children of employees. Oculists and dentists visit the public schools in the mining towns and the schools adjacent to the steel works and examine the eyes and teeth of the children, beginning with those in the lowest grades. The teeth are cleaned and, when it is necessary, fillings are put in. The eyes are examined and the children's parents advised if further attention is needed. No charge is made for the dental and optical service. Glasses when



Fig. 5. Dental nurse instructing school children at a mining town in the use of the toothbrush

prescribed by the oculist are not furnished free, but are purchased by the company at a wholesale price and supplied to the children at cost.

The beneficial effects of the dental and optical service to the children became apparent almost at once. Results in numerous cases have amply confirmed the modern belief that much ill health and even some apparent defective mentality in childhood is due to infected teeth or sub-normal eyesight. With continued attention given the children year after year, it is confidently expected that the good results will become even more noticeable.

In the autumn of 1915 the company and its employees mutually adopted the industrial representation plan for the government of their relations with each other. This



Fig. 7. Visiting nurse treating the family of an employee of the Colorado Fuel and Iron Company

industrial constitution, which has been notably successful in removing causes of friction and harmonizing the interests of employer and employee, provides among other things for joint committees on industrial relations. There are four of these committees in each of the mining districts and at the Minnequa Steel Works. Of these four, one is designated as the "joint committee on sanitation, health, and housing." Within the jurisdiction of this committee falls the general supervision of health and housing conditions. It cooperates with the medical department and the company management in initiating and carrying out whatever improvements seem desirable.

The services of the various committees on sanitation, health, and housing have been valuable beyond computation. Particularly in the mining camps these committees have made periodical inspections, minutely examining everything that has a bearing upon the health and comfort of the employees and their families. As a result of these inspections numerous recommendations have been made, practically all of which have been promptly acted upon by the management.

The Colorado Fuel and Iron Company believes that the health or illness of an employee generally begins at home. It has therefore given much thought to the providing of modern and sanitary dwellings for its workmen. Standards of housing have been constantly improved. In recent years, as the increased earning power of the work-

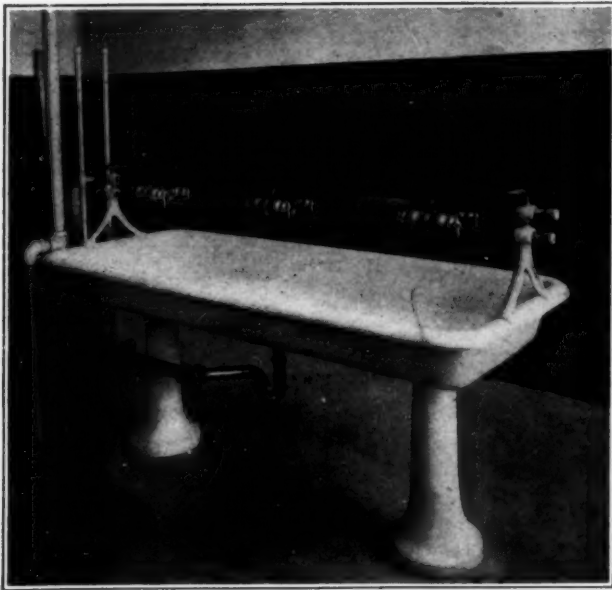


Fig. 6. Standard sanitary sink installed in washrooms used by the employees of the Colorado Fuel and Iron Company

men and their rising ideals of home life have created a demand for even better dwellings, many houses with modern conveniences have been erected at the various properties. The workmen and their families have in the main been found appreciative of the better living facilities provided.

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#### HIGH LIGHTS IN THE RECENT CONVENTION OF THE AMERICAN ASSOCIATION OF INDUSTRIAL PHYSICIANS AND SURGEONS

##### Inspirational Note Held Throughout—Industrial Medical Work Important Today in Stabilizing Labor Con- ditions—Appropriation from Congress Needed

Attending conventions is almost always inspirational. To break away from the daily routine, to make contact with active minds which are working out new problems, and to become acquainted with new points of view, helps one to review his own work with better perspective and to return to it with fresh vigor and enthusiasm.

This was particularly true of the annual meeting of the American Association of Industrial Physicians and Surgeons, held at Atlantic City on June 9, for Lieut.-Col. Harry E. Mock, president of the association, struck an inspirational keynote in his opening address which was re-echoed by other speakers throughout the day. His thought was that the wide application of the principles of industrial medicine and surgery, with the idea of service rather than gain, will be an important factor in solving the difficult problem of the conflict between capital and labor which is becoming more intense every day. He pointed out that the community of interest between the employer and employee can be expressed in no better way than in the solicitude of the employer for the physical well-being of his workers. He showed that largely through this channel broad-visioned employers were doing much to secure the good will of their working men and women and to eliminate friction. He emphasized the fact that to protect the life and health of the worker was not only profitable for the employer but an absolute moral obligation, which, if shirked, would tend to plunge the world still further into the night of class hatred and misunderstanding which seems to be impending.

#### THE CONFLICTING INTEREST OF CAPITAL AND LABOR IN HERNIAS

Later on in the discussion, the question of defining what constituted a traumatic hernia again brought out the importance of the labor problem which touches all branches of industry at the present time. Dr. A. W. Colcord, of the Carnegie Steel Company, read a resolution which defined traumatic hernia as hernia which occurs only when there is a definite laceration of the body-wall together with no evidence of a hernial sac. Dr. Colcord felt that employers were being greatly imposed upon by employees who wished to collect damages under the workmen's compensation act for injuries the original causes of which date back previous to the time of employment. The question of what constitutes a compensable hernia is, of course, one which has proved a particularly annoying stumbling-block in every state where workingmen's compensation laws have become effective. Dr. Colcord's first definition, however, which he later modified, was so drastically in favor of the employer that fear was aroused on the part of many attending the meeting that labor would feel that the American Association of Industrial Physicians and Surgeons was serving the interest of employers rather than that of the working people.

Dr. Otto Geier, of the Cincinnati Milling Machine Company, remarked that, since labor has become so favorably inclined toward the whole proposition of industrial medicine, it might not be wise to antagonize the workers and suggested that perhaps it would be better to ask the American College of Surgeons, which is not in immediate contact with the human side in industry, to define traumatic hernia for the benefit of workingmen's compensation boards.

Dr. Francis D. Patterson, of the Department of Labor and Industry of Pennsylvania, in characteristically vigorous and amusing phraseology roundly criticized "the constitutional effrontery which characterizes the legal profession on every occasion" in the attempt of lawyers to diagnose the conditions which lead to hernias, and suggested that the association should place itself on record as suggesting that a member of the medical profession be placed upon every industrial accident board in order that his advice might be available in questions requiring an expert medical opinion. "There isn't an employer throughout the land," he added, "who hasn't bought an old hernia and paid a darn good sum for it."

Dr. Colcord, in further defending his resolution, said that in paying compensation for a hernia not caused directly by the nature of the employee's work, the employer simply adds the cost of compensation to the price which the ultimate consumer must pay for the product. The man who suffers most, he said, is the employee who goes and lies about his condition. The employee ought to be protected against the premium now placed upon his dishonesty, by defining traumatic hernia so that a congenital or long-standing condition could not be used for securing compensation.

The resolution of Dr. Colcord, however, was referred to the banquet in the evening, but again referred by the banquet to the board of directors for further action.

During the business meeting in the morning it was decided to appoint a legislative committee, a publicity committee, and a committee to draft a curriculum for a uniform course in industrial medicine and surgery which may be given at medical colleges. There was some discussion over this latter suggestion inasmuch as some medical men connected with the faculties of medical colleges felt that medical schools on the whole would find it impossible to add to their curriculum. It was pointed out, however,



that the intention of the suggestion was simply to enable the association to answer a considerable number of queries from medical colleges which had asked the assistance of the officers of the association in preparing such curriculums. At the morning session the officers of the association were re-elected for the following year.

#### A GREAT PUBLIC SERVICE IN IMMINENT DANGER

The outstanding features of the afternoon session were a remarkable paper by Dr. John Moorehead, surgeon of the Interboro Rapid Transit Company of New York, and the appeal of Dr. C. D. Selby of Toledo, Ohio, for a continuation of the division of industrial medicine and hygiene of the working conditions service of the United States Department of Labor. Dr. A. J. Lanza, chief of that division, in his address, which preceded Dr. Selby's appeal, explained in considerable detail the investigations made by his division and how it was on a large scale helping industries in all parts of the country better to protect the health of the men and women in their employ. Dr. Selby made his audience feel that to abolish Dr. Lanza's division of the labor department, as threatened by the unwillingness of the present Congress to appropriate the necessary funds, would be nothing short of a national calamity.

Dr. Selby felt that the practice of industrial medicine was beginning to do much to stabilize labor conditions in the plants into which it has been introduced. "It seems more than a suggestion for stabilizing labor and if ever there was a time when this stability was needed in America it is today. If Congress in its wisdom," he said, "sees fit to cut off the appropriation for this department, it must be held responsible for the results which will follow. I know this wonderful service which Dr. Lanza's division is performing will practically terminate unless something is done to secure an appropriation, and it is our business to see that the United States Government perpetuates the conservation of industrial man-power through this division. We will go back from this convention to the manufacturers of the United States who can put this thing across. It is up to us to convince them of the necessity for immediate action in bringing pressure to bear upon their congressmen in order that the great work which has been started may not cease when it is most needed."

Dr. Selby was formerly associated with Colonel Lanza in the Federal Division of Industrial Medicine and Hygiene. He said that it was his firm belief that physical examinations were the foundation of bettering the health conditions of the workers in any industrial establishment. Without the data which examinations afford, Dr. Selby said it was difficult accurately to learn the source of the employee's ill health. He said that he was astounded to find physical examinations discontinued in some of the munitions factories of the government. He believed that the discontinuance was largely due to the fact that physicians had not utilized the information which they had obtained through the physical examinations. Members of the medical profession knew in theory, he said, how to apply this information, but were not acquainted sufficiently with the vocational needs of the various positions in the plant to use intelligently the information which they had acquired. Dr. B. J. Curry, of the American Thread Company of Holyoke, Mass., was the only one he had found who had worked out a practical basis for the application of knowledge obtained through the physical examination of employees. Dr. Curry had established physical standards required for each job in his plant and, through his card system, was enabled at once to determine whether or

not a man was physically capable of performing the work of any specific position in the plant.

#### A RADICALLY PROGRESSIVE PAPER BY DR. MOOREHEAD

Dr. Moorehead's paper entitled "Is War-Time Surgery Applicable to Industrial Surgery?" was particularly stimulating. The discussion was of a technical nature and cannot be discussed here at length but it will fully repay anyone to obtain a copy of the proceedings of this meeting to read Dr. Moorehead's paper.

Criticism was made by some that Dr. Moorehead's suggestions were too radical and against all precedent. Dr. René Sand, the great Belgian surgeon, in commenting upon this criticism, said that the advance in surgery described by Dr. Moorehead had not been discovered during the war, but had simply been made more evident by the war; that the war had brought out great truths which the conservative and slowly moving body of the medical profession up to the time of the great necessity had failed to recognize.

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#### GOLF LINKS WHICH TOOK THE PLACE OF DRINK

Abingdon, Ill., Golf Course and Club-House Enthusiastically Supported—Small Fee Required of Players  
—Whole Families Learn to Play

This is the story of intelligent action on the part of a manufacturing concern which recognized a health menace to its employees in the use of alcohol. The town in which the factory was located "went dry." Neighboring towns did not. In order to keep its employees from the neighboring towns, this concern built a golf links and organized a golf club among its employees. The manner in which the plan worked is described in the following letter from J. E. Slater, President of the Abingdon Sanitary Manufacturing Company of Abingdon, Illinois.

The reason why I became so thoroughly interested in this golf course was that, for a time, the local option was bothering us considerably on the liquor question in this part of the country, and when Galesburg and Peoria were both wet, there was a tendency on the part of our men to flock to these centers. The thought occurred to me that if we could interest them in a pleasant occupation for their Saturdays, holidays, and Sundays, where we could keep our eye on them, it would be a paying investment. With that thought in view, we put our time, energy, and money into the development of the local golf club, and I am happy to say that about 60 to 70 per cent of the workmen in our factory enjoy and are members of our golf club.

Our dues are \$6.00 a year, or 50 cents a month, as I find that when the men pay something for the privilege of playing, they do not feel that the golf course is a char-



Glimpse of golf links at Abingdon, Ill., where 70 per cent of the employees of the Abingdon Sanitary Manufacturing Company spend their holidays.

itable institution, and a deficit at the end of the year is made up very easily.

It is not unusual when our whistle blows to find a number of our men flocking to the golf course and playing for the different cups, which we present during the year for different contests, and when we go out later in the evening, we will find six or seven of their families enjoying a picnic lunch on the grounds.

This is also a very good thing for the factory, from the viewpoint of interesting customers. We had a number of customers who would not come to our plant or to Abingdon if it were not possible for us to get out and spend a Saturday or Sunday with them playing golf.

The golf course of the Abingdon Sanitary Manufacturing Company is one of the most interesting nine-hole courses that can be found in Illinois. A good, substantial club-house was built, with the result that the employees became so interested in the game that it was very extensively used.

One of the results has been that the employers have become acquainted not only with their workers but with the workers' families as well.

Now that prohibition will soon abolish the alcohol evil in the towns near Abingdon, the value of the golf links to the company still continues.

The idea is a novel one, but it has worked out with excellent results. Perhaps some other manufacturing concerns may find it useful.

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#### THE CONCRETE VALUE OF PHYSICAL EXAMINATIONS

**Out of 599 Employees Examined Only Five Were Found To Be Normal—This Service Benefited 439**  
—As a Business Proposition It Pays

One of the principal reasons why more manufacturing concerns do not undertake to care for the health of their employees is the lack of definite statistical information which proves the value of this work. The following correspondence is of particular value because it gives definite information as to the need and value of physical examinations of employees. Information such as this is the most valuable kind of ammunition for the guns of industrial physicians and surgeons. It is the text of their gospel. The name of the concern is omitted by request. Their letter follows:

"Our physical examinations are conducted under the supervision of the Life Extension Institute. We started this service in May, 1915, leaving it optional with our employees whether or not they would take advantage of it. About 70 per cent of the employees made use of it. Later on we qualified this by making it compulsory for new employees, but voluntary for old employees. The same percentage still holds good.

"In 1916, 1917, and 1918 we repeated these examinations. The following figures taken from one of our final reports show the results of these examinations and what we learned on checking up to see if the employees were following out the suggestions.

"Out of 599 employees examined only five were found to be normal; 594 required advice regarding their living habits or physical condition; 377 of these were advised to go to a doctor for treatment, and of these 377, 317 were not aware of any impairment whatsoever. Very nearly every disease or disease tendency known was found.

"In following up the reports sent to our employees and checking them to see what had been done, we learned that of the employees who have carried out the suggestions or are carrying them out (this includes going to their doctors, dieting, changing their living habits and their conditions at home) there were 361; employees who are partially carrying out instructions, 66; employees who had made plans to do as advised (such as having their teeth attended to or vision corrected), 12; employees who had done nothing, 160. These results showed that during that

period alone, 439 of our employees have or will have been benefited by this service.

"There were many cases of poor eyesight found, also teeth that required treatment. Several cases of unsuspected heart lesions and also a number of cases of incipient tuberculosis were discovered.

"There is no question whatever but that these examinations have resulted in a great deal of good for our employees. As a business proposition the service pays. The expense is considerable, and, while the returns do not appear in dollars and cents, they are there nevertheless.

"It is advisable before such a proposition is put up to the employees of a concern to educate them thoroughly into the principles of the idea and the ultimate aim; otherwise considerable opposition will be met.

"So far as decreasing the labor turnover is concerned, frankly, we do not believe it makes any difference, when a man or woman desires another job."

Statistical information from any concern which has had either success or disappointment in their health programs will be very greatly appreciated by the editor of this department.

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#### Employers of Labor Should Guard Against a Reported Increase of Tuberculosis

Dr. Frederick L. Hoffman of the Prudential Life Insurance Company of Newark, N. J., says that "for the first time in many years the tuberculosis death rate of American cities shows a distinct upward tendency in contrast to a persistent decline in the past."

The condition needs attention, although it is not alarming, he says. This emphasizes the need for the thorough physical examination of all industrial workers to protect to the fullest extent the labor forces of the nation at a time when labor should be functioning at its highest efficiency.

It is difficult for many employers of labor to realize that wisely directed care for the health of their employees is a gilt-edged investment. The present epidemic of influenza has forced many employers to care for the health of their workers in order that their plants might not be shut down entirely. The epidemic has given an extreme example of a condition which constantly exists to a lesser extent. Employers would do well to guard in every way against a possible marked increase of tuberculosis.

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#### PLANT DISPENSARY A PAYING PROPOSITION

**Manufacturing Company Reports Benefit to Company and Men in Health Welfare Work**

A recent letter sent to the A. B. Farquhar Company, Ltd., manufacturers of farm implements and heavy machinery, of York, Pa., brought the following answer regarding the benefit of their plant dispensary:

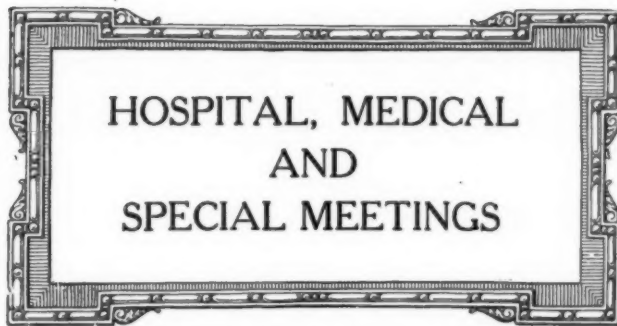
"Undoubtedly the hospital room has been a benefit to our men, and also a benefit to us, inasmuch as the men have had quick attention, often overcoming the necessity of going out and hunting a doctor; and, in a great many cases, they have been able to go back to work practically at once.

"Through the means of having a room to go to, the case is at once brought under observation, and if it is necessary for them to go home for further treatment, the case can be followed up without delay. Consequently, we believe that the men are brought back to the plant in better condition and possibly sooner than they would return otherwise, and, in addition, they are prevented from coming back before their physical condition permits.

"We therefore feel that what we are doing is a benefit, not only to our men, but to ourselves also."

The ignorant are never defeated in an argument.—Japanese proverb.





SEVENTIETH ANNUAL SESSION OF THE  
AMERICAN MEDICAL ASSOCIATION

**"Victory Meeting" at Atlantic City, June 9-13, Celebrates  
Advances in Medicine and Surgery Made  
During the War**

The Seventieth Annual Session of the American Medical Association was held at Atlantic City, June 9-13, 1919, and was known as "The Victory Meeting."

When the president, Dr. Arthur Dean Bevan, called the opening general meeting of the American Medical Association to order on the steel pier at Atlantic City, on Tuesday evening, June 10, the music hall was filled to overflowing—main floor and gallery alike—and the platform was occupied by a large group of foreign guests, many of them in uniform. An interesting feature of this meeting which preceded the address of the president-elect, Dr. Alexander Lambert, was the introduction by Surgeon-General Ireland of the foreign guests. As the representatives of each nation arose a band played the appropriate national air. In his address Dr. Lambert dwelt upon the success of preventive medicine in the war as contrasted with the destructive effect of disease in former wars, the lessons to be learned in determining future action, the educational needs of the medical profession as emphasized by the war, the relation of the Red Cross to the army, and the necessity for a nation-wide controlling organization to wipe out preventable disease, i. e., a national department of health.

Among the matters of interest to hospitals discussed before the convention was the suggestion of the speaker of the house of delegates, Dr. Hubert S. Work, that the association create a council on hospitals:

"Such a bureau should comprehend hospital architecture, construction, plumbing, organization, contagious diseases, general medicine, surgery, interns, practical nursing, trained nursing—in short, a bureau of information for the standardization of all detail relating to the hospital care of the sick. Standards fixed by a permanent council of experts, directed by this association, would compel hospital directors to comply with their requirements in order to secure a coveted rating. It would avoid the expensive canvass and tedious propaganda now being conducted jointly by the American Medical Association and the American College of Surgeons. The weight of the association's influence behind this movement directed in the field by selected full-time men, would give the public assurance and point of appeal on hospital questions.

"Duties of this bureau would be: consultations with municipalities proposing to build; with industrial companies planning sick care for their employees, and with state governments. Proprietary and sectarian hospitals contemplating enlargements or troubled by incompetent management would welcome the efficiency expert of such a bureau, while philanthropists could know that their bequests were worthily bestowed and would be honestly conserved, as by a trust."

The council on medical education reported the work of the third survey of hospitals. Of the 6,440 hospitals in the United States which in October, 1918, had two or more

beds, or a total capacity of 758,442 beds, only 1,126 hospitals, or 17.4 percent, have or desire to have interns. These 1,126 hospitals, however, include the larger institutions and have 35.6 percent of the total bed capacity. A special questionnaire was sent to these hospitals, and elicited detailed information from 801.

As regards laboratory facilities, 97 percent are equipped to make urinalyses, 94.6 percent for blood examination, 88 percent for making skiagraphs, 89 percent for gastric analyses, 88 percent for bacteriologic examinations, 77.5 percent for tissue examinations, 59.5 percent for nitrogen determinations, and 20.8 percent for electrocardiographic examinations. About 79 percent have expert laboratories in charge of their clinical pathologic laboratories; 76 percent have expert roentgenologists; 72.8 percent have expert anesthetists and 67.5 have trained dietitians.

As for case records, it appears that 88 percent of these 801 hospitals keep a record of physical examination at admission; 90.5 percent, a daily record; 88.3 percent, a description of operations; 92 percent, condition at time of discharge; 72.8 percent, necropsy findings; 69.1 percent, final results. In 72.6 percent, histories are signed by the staff physician; in 57.8 percent, a separate index by name and diagnosis is kept.

Only 46.3 percent of these hospitals have medical libraries, 61.9 percent have medical journals available.

A tentative schedule of essentials in a hospital for the satisfactory training of interns comprises requirements in regard to (1) the staff, (2) hospital equipment, (3) histories and records, (4) the work of the intern, and (5) miscellaneous.

1. An organized staff, composed of men of unquestionable integrity, proficient in their respective fields, is a requisite. Staff members should give personal attention to the patients under their charge; each staff member should visit the hospital every week, and some member of each department every day. The training of the interns should be directed and supervised by staff members. Clinical conferences, clinical and pathologic conferences, and hospital medical societies, for staff members and interns, are also to be desired.

2. The equipment should include pathologic, clinical and roentgenologic laboratories, each in charge of an expert; also a working medical library, and adequate provision for the housing and recreation of interns.

3. Complete histories, signed by the person writing them, should be taken, and should cover complaint, physical examination at admission, laboratory findings, description of operation if any, daily record, condition on discharge, date of discharge, end results, and necessary findings in case of death if necropsy is performed. The records should be kept by a trained historian and should include an alphabetical index of patients, another arranged by diagnosis, and for surgical cases, another arranged by regions involved.

4. A set of printed rules governing the rights, duties and privileges of interns, should be furnished each intern or posted in a conspicuous place. The work of the interns should be under the supervision of staff physicians and should include the writing of histories, clinical laboratory work, roentgenologic work, administration of anesthetics, dietetics, obstetrics, necropsies, observation, care, and treatment of patients, application of surgical dressings and performance under supervision of minor and more common major surgical operations. The care of patients and routine work should not demand more than eight or at most ten hours of each intern. Intern service should extend through at least twelve months and may advance

tageously be extended through eighteen months or two years.

5. No preference is expressed as to rotating or non-rotating services for interns. Where the internship is taken as a prerequisite to graduation, the evaluation of the hospital work should be done by the medical school. A hospital should have at least seventy-five beds and three interns to provide for a rotating service in laboratory, medicine, and surgery. In hospitals having four or more interns, they should preferably begin their work at different times and pass through junior and senior service. In hospitals having one hundred beds or more there should be an addition to the interns, a full-time resident physician who has had at least one year's experience as an intern, and whose duty it should be to supervise the work of the interns.

One of the papers in the orthopedic section which was of vital interest to hospital workers because of its bearing on the efficiency of nurses employed in hospitals, was Dr. William C. Peters' paper on "The Foot Problem in the Army." After classifying the men who came up for examination into three classes: (1) men with good feet; (2) men with potentially weak feet for whom an alteration of the shoe was usually adequate treatment; and (3) men with bad feet who were given limited service. Dr. Peters drew certain lessons for civil life and practice. He said, in the first place, that nearly all foot trouble is caused by bad shoes. In the second place, he thought that the army-shoe last would cure most defects. In the third place, he urged that more attention should be given to fitting shoes, and, finally, that foot exercises under careful supervision give good results. In the discussion on the paper it was urged that a nation-wide campaign be conducted on the construction and fitting of good shoes.

Two general meetings of peculiar interest were the victory meetings, one of which was held in the music hall on the steel pier on Wednesday evening, the other in Keith's theater on the garden pier on Thursday evening. At the former, national organizations with definite medical interests, such as the Red Cross and the National Tuberculosis Association, were represented by speakers of their choice. At Thursday's evening victory meeting, representatives of different nations were asked to relate what their nation had done medically under war conditions. This meeting was followed by a theater party and, in an adjoining hall, a reception to the president and foreign guests.

The scientific exhibit was divided into three sections: the main exhibit; the special exhibit of the medical department of the army, the bureau of medicine and surgery of the navy and the U. S. Public Health Service; and the moving picture exhibit. The pictures shown include, "The Navy Put Them Over," showing the part played by our navy in transporting and guarding our troops; "Fit to Win," an education film on sex hygiene; "A Naval Hospital," showing the character and work of a naval hospital; "The Field Hospital Unit," showing the work of the field hospital; "The Ambulance Company," showing the organizations and work of the ambulance company; and "Open Your Eyes," a film on the social evil and venereal diseases.

Dr. Alexander Lambert, New York, took office as president for this year, and Rear Admiral William C. Braisted, surgeon-general of the United States Navy, was chosen president, to take office in 1920, and the following men were re-elected to office: William N. Wishard, Indianapolis, first vice-president; E. Starr Judd, Rochester, Minn., second vice-president; C. W. Richardson, Washington, D. C., third vice-president; John M. Baldy, Philadelphia,

speaker, house of delegates; Dwight H. Murray, Syracuse, N. Y., vice-speaker, house of delegates; Alexander R. Craig, Chicago, secretary; William Allen Pusey, Chicago, treasurer; George H. Simmons, Chicago, editor and general manager.

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#### MINNESOTA HOSPITAL ASSOCIATION

##### Second Annual Meeting Full of Interest—Membership Doubled Since Last Year

The Minnesota Hospital Association held its second annual conference in Minneapolis June 4 and 5. The growth of this organization has been very gratifying and surpassed all expectations, for the registration showed a membership of 104, double that of last year.

##### President's Address

Standardization, said the president, Dr. E. S. Mariette, superintendent of Glen Lake Sanatorium, Hopkins, has been the war slogan. If standardization was valuable during the war, why is it not valuable now? Why have any but standardized hospitals?

No one group concerned in hospital work, Dr. Mariette said, can determine standards for all groups. The only true standardization can be arrived at by the cooperation of all. Dr. Mariette opposed the claim of nurses to determine the standards of their own instruction.

##### Educational Work at Fort Snelling

Capt. W. S. Miller, chief of the educational service, U. S. A. General Hospital No. 29, Fort Snelling, described the educational work there and its relation to the other services. Fort Snelling is one of the four orthopedic hospitals in the country. The big thing there is the surgical and orthopedic service. The chief purpose is to get the men cured and back into civil life again. Nothing is done by the educational department unless prescribed by the ward surgeon. There is the best of cooperation between the educational and the medical men. The educational work is divided into five branches: (1) the psychological and statistical; (2) the general division; (3) the technical division; (4) the recreational division, and (5) the occupational therapy division. There is a representative of the psychological and statistical division who interviews the patient in each ward within forty-eight hours of his arrival and takes his educational and occupational history and his occupational preferences and gives him a psychological examination and assigns him to class work. The general division is concerned with instruction in academic subjects. Foreigners and men who wish to supply deficiencies in early education can here receive the instruction they desire. The technical division gives instruction in occupational subjects, including agriculture and shop work and commercial subjects. The fourth, the recreational division, by agreement between the Surgeon-General and the Red Cross, is in charge of the Red Cross. Its activities cease between the hours of 9 and 4, while instruction is going on, at least so far as concerns amusements in which the men are passively entertained. Recreations in which the men themselves are acting, such as tennis, ball, or billiards, do not fall under this prohibition.

Men, who because of their disability are unable to attend class out of the ward are given instruction in handicrafts or academic subjects by the reconstruction aids in occupational therapy, women especially trained for this particular work.

Work is not compulsory except in certain special curative cases. As the average length of stay in the hospital is only twenty-one days, it is impossible, in the majority



of cases, to accomplish much in the way of perfecting a vocation. The work does, however, provide the stimulus for the activity prescribed by the surgeon. The surgeon may say that he wishes the patient to exercise his hand or his arm or some other portion of the body, in a certain way. It is the task of the educational service to provide an occupation in which the prescribed activity may be embodied, so that the patient will have an interest to fix his attention on the performance of his task.

During the patient's brief stay in the hospital, every effort is made to interest him in some trade or profession, so that when discharged, if disabled, he will avail himself of the training afforded him by the Federal Board for Vocational Education. Every disabled man is interviewed by a representative of this board before he is discharged from the hospital.

#### The Rehabilitation Work of the United States Army

Mr. H. W. Jones, district vocational officer of the Federal Board of Vocational Rehabilitation for Minnesota, North and South Dakota, and Montana, described the work done by his division. It is the task of this body to follow up the discharged, disabled men and see that they receive the training and encouragement needed to make them self-supporting. Every man who is disabled 10 per cent or more is entitled to compensation and training. The Federal Board of Vocational Rehabilitation adds enough to the compensation to which each man is entitled to make \$75 a month while he is in training.

The board is not running a school; its effort is to find suitable opportunities for instruction in each case. The work is tremendously varied and there are no two cases alike. As an illustration, Mr. Jones cited the case of a Finnish boy who had been a presser, earning \$20 a month in his father's tailor shop. He wanted to be a tailor's cutter but he understood very little English. A chief cutter who understood Finnish was found, and after five months' instruction under him, the boy was offered \$200 a month as a cutter.

A boy who had lost a leg was trained in acetylene welding and after six weeks' instruction was able to take a position paying 68 cents an hour.

An automobile mechanic who was also a musician became totally deaf and therefore unable to practice either of the former callings. He was instructed in lip-reading and given an opportunity to develop a taste for drawing on which he had hitherto placed no value. After three months' time he was paid \$15 for one drawing.

The service keeps track of all the men because each one has to report every month in order to receive his compensation.

#### Industrial Work in Tuberculosis Sanatoriums and Its Relation to the Convalescent in the General Hospital

Miss Beatrice Lindberg, industrial worker for the Advisory Commission of the State Sanatorium for Consumptives, defined industrial work as anything to take the patient's mind off from the personal equation.

Miss Lindberg told of a woman who was listless and idle and who could not be induced to take an interest in sewing or embroidery or crocheting because "I'm so weak up here" (indicating her arms and chest).

Her interest was aroused at the sight of a basket. "You make?" she asked Miss Lindberg. "Can I make?"

"But," Miss Lindberg said, "you're so weak up here."

"Oh," she replied, "I'm not so weak as I say." And later she proudly displayed what she had made, saying with satisfaction:

"I'm much better. See, I can work."

Patients are allowed to have the objects they have made on paying the price of the materials, if they can do so. If this is a hardship, it is not insisted on. Articles left on hand are placed on sale at market price. Patients may sell their own articles but only at the prices fixed by the sanatorium. The tendency to overwork for the sake of gain, however, must be guarded against.

The work has produced a new attitude of the patient toward the sanatorium. One woman said, "I am going to tell all my friends that the sanatorium is a nice place to come to, because you can learn things you couldn't get a chance to learn anywhere else."

#### Duties of a Director to the Hospital

Mrs. W. D. Gregory, president of the Northwestern Hospital, Minneapolis, the directing board of which is composed entirely of women, said that the first duty of a director is to attend board meetings regularly. At these meetings the policy of the hospital is determined and ways and means of carrying on work decided on. The loyalty of everyone connected with the hospital is a most important factor, and this should begin with the board.

#### A Properly Organized Clinical Laboratory for the Private Hospital

Dr. C. R. Drake, pathologist of the Swedish Hospital, Minneapolis, said that the laboratory in the hospital should rank with any of the departments in importance. A central location, near the operating-room group and adjacent to the x-ray laboratory, is most desirable, because it permits easy transmission of material and the presence of the laboratory man in the operating room when desired. An adequate but not extravagant allowance of space and ample and up-to-date equipment are also important. The records should be concise and kept so as to be accessible. A permanent file should be kept with interesting specimens. The laboratory should be in charge of a medical director with sufficient clinical knowledge to interpret the laboratory findings for the clinical men.

#### The Roentgenological Laboratory in the Private Hospital

Dr. F. S. Bissell, of the University Hospital, Minneapolis, believes that there is something radically wrong with the roentgenological laboratory in the private hospital. New ideas in roentgenology are to be found, not in the hospital but in private x-ray establishments. The reasons are, in part, the following: Roentgenology is a mushroom growth of the last twenty years. No one has known just what the field of roentgenology properly was. It has even been denied that the roentgenologist had any field as a medical specialist. Few men put their best efforts into roentgenological departments in private hospitals because these departments have been too highly commercialized. The roentgenologist is expected to split his fee with the hospital, and, if the hospital employs a technician, it takes the whole fee. A roentgenologist working in his own private laboratory can use and break all the equipment he needs to produce the results he desires, but he is called to account in the hospital for any increase in the consumption of supplies, and, therefore, he can not do his best work in the hospital.

There is a sharp line of demarcation between the roentgenologist and the technician. The roentgenologist receives cases as a consultant in medicine, and, in making his report, takes into account the findings which the clinician furnishes him. The technician merely receives the patient for a picture or treatment under instructions under or from the physician, and these instructions are sometimes ridiculous. A technician, for instance, received a

patient with the instructions from his physician to "give five-minutes' treatment twice a week." A five-minutes' treatment might be fatal, or it might be so light as to be entirely without effect. The roentgenologist should determine and supervise the treatment, and, in making his report, he should give the facts which he finds, his deductions from those facts, and his diagnosis.

Dr. Kano Akeda, roentgenologist and pathologist to St. Barnabas Hospital, Minneapolis, declared that Dr. Bissell did not do justice to the roentgenologist in the private hospital. It is true that the small hospital cannot afford to keep a full-time roentgenologist, but the position of roentgenologist and pathologist may very well be combined and give employment to a full-time man.

#### Hospital Medical Records

Dr. H. B. Sweetser, of the staff of St. Mary's Hospital, Minneapolis, emphasized the importance to the patient, to the physician, and to the hospital, of properly kept medical records. He declared that a standardized hospital had a claim on the community and should be subsidized.

#### Relations Between the Staff and the Hospital

Dr. R. E. Farr emphasized the necessity for a staff on every institution that calls itself hospital. No one goes to see work done at a non-staff hospital. The staff should be chosen principally by doctors. A physician is not competent to select the best nurse, nor is anyone but a physician competent to select the best staff physician.

#### The Hospital a Community Institution

Mr. G. W. Olson, superintendent of the Swedish Hospital, Minneapolis, said that the hospital, like the public school, was a community institution. While he would not go so far as to say that attendance at the former institution should be made universal and compulsory, he did believe that there were a number of other points of resemblance. Just as the pupil in the school receives the benefit of the entire curriculum offered, so the patient should receive the benefit of all that the hospital has to offer. He should not be sent out, cured of the complaint for which he entered, but suffering from others, unsuspected, but perhaps equally dangerous. He should be thoroughly examined and put into a condition as nearly normal as possible. Mr. Olson did not agree with Dr. Farr that the staff should be selected entirely by physicians. He believed that it should be selected by the board of trustees, with the advice of the best physicians available for the purpose.

#### Hospital Standardization

Mr. John G. Bowman, director of the American College of Surgeons, emphasized the necessity of getting the staff to formulate rules for its own guidance and then making everyone who practices in the hospital, including the biggest men in the community, submit to these rules.

Organization of the staff does not necessarily mean a closed staff. The staff may include all of the physicians practicing in the community. Staff meetings should be held regularly, to analyze results and to call attention to good work as well as to ask for an explanation of poor.

In the evening a round-table conference, conducted by Mr. J. E. Haugen, manager of St. Paul Hospital, took up a number of practical questions.

#### Safeguarding the Hospital Against Non-Payment of Patients' Bills

Mr. G. W. Olson, of the Swedish Hospital, Minneapolis, said that if the bill presented in the last session of the legislature had passed, it would have made the patient liable for unpaid bills to a hospital just as he now is for bills owed to a hotel. In response to a question, Mr. Olson

said that he takes a note from a patient who shows a disposition to dispute an account. If the patient is simply hard up, he prefers not to take a note. A note is not so good to bring before the court for collection as an itemized account.

Dr. A. B. Ancker, superintendent of the City and County Hospital, St. Paul, said that his institution had an easy way of solving the problem; they transferred a patient who was slow pay to the free service. This was usually so unwelcome to the patient that he would pay to avoid it.

In response to a question, the Rev. Henry Hartig, superintendent of St. Andrew's Hospital, Minneapolis, said that the average annual loss of his institution for the last four years through bad accounts was 5 per cent. Mr. Olson gave his as 2.5 per cent.

#### Dining-Room Service

The question here was in regard to the proper seating of the various branches of the service. Dr. Ancker said that the City and County Hospital had one dining-room for 150 nurses; another for the interns, the chief engineer, and steward, presided over by the matron; a third for the assistant superintendent and his wife, the resident physicians, and the resident surgeons; and a fourth and fifth for the male help and the female help, respectively. He believed that round tables were the best, seating from eight to ten at a table.

Miss Anna Keller, of the City Hospital, Red Wing, stated that the cafeteria system had worked out very well for the Sunday evening supper. It allowed one-half the help to take a half-day off.

#### Meeting the Need for Nurses and Student Nurses

Dr. A. B. Ancker, of the City and County Hospital, St. Paul, said that the remedy for the shortage of nurses is to shorten the term of training. At his hospital the quota is filled, but not with graduate nurses. He believes that the nurse should get sufficient training in two years. A public-health nurse should have three or four years' training.

Miss Lydia H. Keller, secretary of the Minnesota State Board Examiners of Nurses, gave the reasons for insufficient supply of nurses as long hours on duty, bad housing conditions, and inadequate allowance of pay. Many students are put on special duty for twenty-four hours at a time and deprived of opportunity for lectures and time for study. The hospitals which are shortest of student-nurses and executive help are those which make the most unreasonable demands of their nurses; thus cause and effect work in a vicious circle; the hospitals are obliged to overwork their nurses because they cannot get enough, and they cannot get enough because they overwork their nurses.

#### Social Service Work in the General Hospital

Miss Marian Tibbetts, of the social service department of the University Hospital, Minneapolis, briefly sketched the history of hospital social service, and described the character of the work done at the University Hospital. Much is done in the obstetrical and gynecological departments, especially with unmarried pregnant women. Heart cases, cases of malnutrition, and gonorrheal infections, including gonorrheal vaginitis in children, are also important divisions. The primary function is education, and other existing agencies are utilized wherever possible.

#### The Dental Resident in the Hospital

Dr. W. A. Grey, dental resident of the University Hospital, Minneapolis, read an interesting paper on this subject, illustrated with lantern slides, which it is not neces-



sary to abstract here as he has promised to write a somewhat extended paper on the subject for THE MODERN HOSPITAL.

#### Engineering Problems of the Hospital

Dean John R. Allen, of the College of Engineering of the University of Minnesota, emphasized the importance of the problems of air-circulation, dust, and the heat generated by people in the room. He believes it impossible to ventilate a hospital today without the use of a mechanical system and humidifiers; where humidifiers are used, opening windows makes conditions very much worse. Minnesota, Dean Allen says, has a law which requires institutions to maintain ventilating plants but does not require that they be operated. Because it takes money to run them, many of these expensive plants stand idle. Dean Allen believes it wasteful to put a \$100,000 plant in charge of a cheap man, incapable of operating it.

#### Hospital Standardization and the American College of Surgeons

The interest excited by the talk of Mr. Bowman, director of the American College of Surgeons, prompted the arrangement of an opportunity for members to ask him questions in regard to the hospital standardization program of the college. At least one point of misunderstanding was cleared up. It had been inferred by some hospital people that in order to comply with the standards in regard to case records, the hospital must in every case take its own histories. Mr. Bowman explained that it was perfectly satisfactory if the physician who sent the patient to the hospital would send in, also, a duplicate copy of the history he had taken.

#### Nursing Education

In introducing the speaker on this subject, the chairman referred to the recent movement for an eight-hour day and fifty-six-hour week for nurses (defeated in the last Minnesota legislature), and said that he hoped it would be possible to get together and come to an understanding on the subject.

Miss Carrie E. Eppley, superintendent of nurses at Minneapolis City Hospital, briefly reviewed the history of nursing. She quoted from an eighteenth century writer:

"I inquired from Dr. ——— about the characters of the nurses, and he says they always engage them without any character, as no respectable person would undertake so disagreeable an office. He says the duties they have to perform are most unpleasant, and it is little wonder that many of them drink. . . . I know that a respectable woman was declined the other day, as being too good for the situation. The only conditions that are made are—that they are not confirmed drunkards."

The day has gone by, said Miss Eppley, when it is possible to have an efficient nurse who has not first had a good education as a foundation. Aren't we all anxious to have the pupils receive a high nursing education and our school to be considered at least *one* of the very best, and yet do we not often allow our hospital problems to interfere with the education of our pupils? How many of us plan curriculums which require that our pupils are to have so many classes of a certain number of hours in a certain subject and then fail to relieve them from duties in the hospital for their classes? Then, too, how many of us fail to give the pupils sufficient time to make the preparation for their class work? Then, too, we have the night nurse who usually has twelve hours on duty. She must get up several times a week for classes. Are we considerate in planning our class hours so that the night nurse does not

have to be disturbed until late in the day for her classes?

Another great problem that comes to us in educating the nurse is—just how much of the domestic work should she be expected to do, that is, mopping, cleaning, and dish-washing? Of course, she must have sufficient knowledge of what this work is and how it is to be done in order to direct those whose duty it may be to do this work; but today when our domestic help fails us and the dishes are dirty and no maid can be secured, are we as women as well as nurses to refuse to do the work of a domestic? Can someone solve this difficult problem and relieve the already over-taxed and tired nurse from both the labor and the mental strain, (for she does resent this kind of work, even in her days of probation)?

In discussing this paper Miss Margaret Crowl, president of the State Board of Examiners of Nurses, said that in the wards, patients were the first consideration; while the nurses are not forgotten when there is need for extra service, too often they are overlooked when it comes to providing them with proper food, air, and opportunities for exercise and rest.

Miss Marian L. Vannier, acting superintendent of nurses at University Hospital, Minneapolis, said that she had never worked under any other than the eight-hour system. She has, herself, put it into effect without requiring more nurses than under the ten-hour system.

In California the law does not permit nurses to work more than eight hours daily or more than forty-eight hours a week. Under this system, most hospitals have a seven-hour week-day schedule and six on Sundays, while others have eight hours daily, and one full day off once a week. The labor forces offered the hospitals a fifty-six-hour week and the hospital refused; thereupon a forty-eight-hour week was put through.

Dr. A. B. Ancker, superintendent of the City and County Hospital, St. Paul, failed to see why it was necessary to get together on a situation which was satisfactory to practically everyone. He had never seen a broken-down, sickly, student nurse or one adversely affected by training; "there ain't no sich animal."

He believes in the eight-hour system and is arranging to put it into several departments of the hospital, but not for nurses.

Miss Lydia H. Keller, secretary of the State Board of Examiners of Nurses, said that nurses do not wish to have their hours regulated by legislation if it can be prevented. The failure of hospitals to limit the working hours of their student nurses necessitates legislative action.

Mr. G. W. Olson, superintendent of the Swedish Hospital, Minneapolis, said that the measure advanced in the last Minnesota legislature is too far advanced for the state but not for the nation. It is an inevitable thing and correct in principle.

Dr. H. O. Collins, formerly superintendent of Minneapolis City Hospital, now of Winnipeg General Hospital, spoke of the lack of appreciation on the part of the public and the hospitals of what the pupil nurse is entitled to receive in the way of training. The hospital contracts to give the pupil nurse training in return for her services. It is no more entitled to deprive her of hours for lectures and study because of any increased need for her services than it would be to deprive any of its employees of their pay because it would be convenient to use the money in some other way.

#### The Eight-Hour Law for Women Employees in Hospitals

Miss Eliza Evans, secretary of the minimum wage committee, said that if nurses and the hospitals do not take

action to limit hours of labor, the public will. Eight hours as the labor standard is not only nation-wide but world-wide. It has been proved that the output is greatest and the laborer most efficient under an eight-hour system.

The chief objection on the part of any employer is the increased cost on beginning to put the eight-hour system in operation. The public has no right to medical service at the expense of the workers. It is a matter of interest that whereas for the protection of the race it is particularly desirable that the working hours of women be safeguarded, a thousand men have the eight-hour day for every woman who has it.

#### French Hospitals and Nurses

Dr. A. T. Laird, superintendent of Nopeming Sanatorium, Nopeming, gave some of his experiences in anti-tuberculosis work in France. He described the great system of state-maintained hospitals under the public charities, the *Assistance Publique*, and the tuberculosis dispensary at the Hôpital Léon Bourgeois.

#### Election of Officers

The following officers were elected: Col. L. B. Baldwin, superintendent of the University Hospital, president; Dr. P. M. Hall, superintendent of the Walker Sanatorium, first vice-president; Mrs. S. H. Knight, superintendent of Asbury Hospital, Minneapolis, second vice-president; Miss Naomi Johnson, superintendent of the City Hospital at Red Wing, third vice-president; J. E. Haugen, superintendent of St. Paul Hospital, secretary and treasurer; Dr. A. B. Ancker, superintendent of the St. Paul City and County Hospital, Miss Bertha Matlick, R.N., superintendent of Hill Crest Hospital, Minneapolis, and Dr. A. T. Laird, superintendent of Nopeming Sanatorium, Nopeming, members of the executive committee.

Governor Burnquist, Dr. E. P. Lyon, dean of the medical college at the University of Minnesota, and the members of the state board of control, were elected honorary members of the association.

The next annual meeting of the association will be held in Duluth, June, 1920.

The association adopted a resolution, offered by G. W. Olson, declaring in favor of "the standardization of medical and surgical practice in the hospitals of Minnesota."

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#### CATHOLIC HOSPITAL ASSOCIATION OF THE UNITED STATES AND CANADA

##### Meeting Held in June in Chicago—Officers Elected—A More Extended Notice To Follow

The fourth annual convention of the Catholic Hospital

Association of the United States and Canada was held June 25, 26, and 27 in the hall of St. Xavier's Academy, Chicago. Most Reverend Sebastian G. Messmer, Archbishop of Milwaukee, Reverend Charles B. Moulinier, Regent of the Marquette School of Medicine, Milwaukee, and Dr. Bernard Francis McGrath, of Milwaukee, were re-elected honorary president, president, and secretary, respectively. Rev. M. P. Bourke, Ann Arbor, Mich., was elected vice-president. Vice-presidents are to be named from each order represented in the membership of the association.

The board of directors is as follows: Dr. Joseph Byrne, New York; Dr. L. D. Moorehead, Chicago; Mr. Michael Zimmer, Cook County Hospital, Chicago; Sister Veronica, Mercy Hospital, Chicago; Sister Mary Picher, Montreal General Hospital, Montreal; Sister Bernadine, St. Joseph's Hospital, St. Paul, Minn. There is in addition an advisory committee consisting of bishops and archbishops.

The proceedings of the meeting will be reported in the next issue of THE MODERN HOSPITAL.

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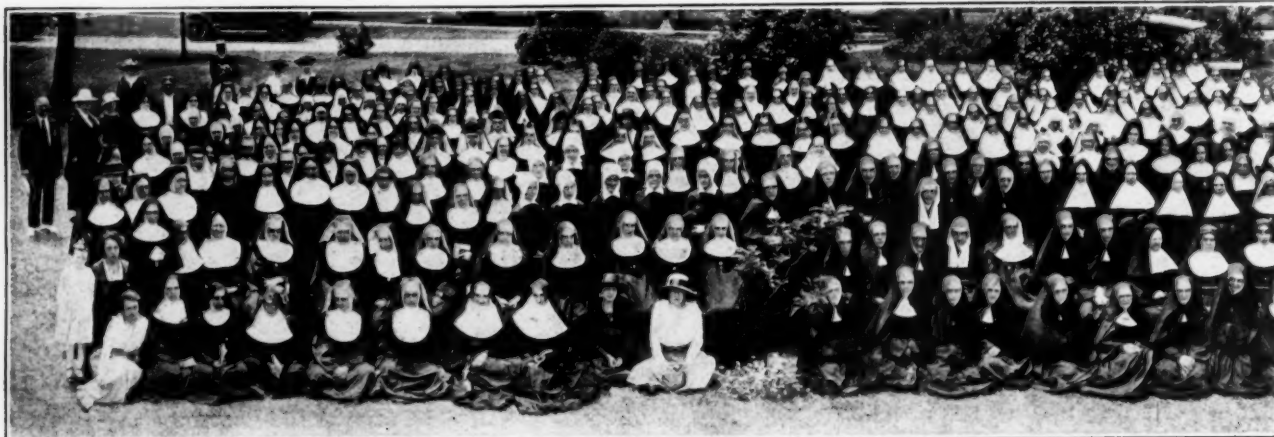
#### THE STANDARDIZATION OF TUBERCULOSIS SANATORIUMS

Committees From the American Sanatorium Association, the National Tuberculosis Association, and the Mississippi Valley Conference on Tuberculosis Recommend Standards for the Grading of Sanatoriums

On June 14, committees from the American Sanatorium Association, the National Tuberculosis Association, and the Mississippi Valley Conference on Tuberculosis met to consider the question of standardization of tuberculosis sanatoriums.

A plan of standardization has been drawn up which will be revised at the next annual meeting and turned over to the National Tuberculosis Association with recommendations that it supervise future gradings of tuberculosis sanatoriums as outlined in the recommendations.

The plan, as it stands now, is to grade the sanatoriums on plant and equipment, on administration, and on medical service. Under each of these factors is a schedule including all the items which the rating commission feel are valuable in the standardization of institutions. All values, both as to quantity and quality, assigned to any item under any factor, shall be precisely stated, and the establishment of claims shall be based simply on questions of fact. Items which do not lend themselves to this



Delegates of the Catholic Hospital Association assembled on the beautiful lawn of St. Xavier Academy, Chicago, where



restriction shall not be included in the schedule. These items shall be divided into the following three classes: items essential for standardization; additional items which add to the sanatorium's usefulness; such items of superiority as deserve special recognition.

Sanatoriums showing merely such qualifications as come under the first heading shall be rated "C"; those coming within the second, "B"; and those coming within the third, "A." Each rating shall have a definite numerical value so that an average may be struck between the ratings of the three factors of any one institution and the final letter assigned.

The first provisional standardization shall be made from unchecked reports returned by the sanatoriums themselves on suitable forms, and later standardizations, to be published in the *Journal of the Outdoor Life*, will be based on these returns, checked as may be necessary to substantiate claims.

The committee of the American Sanatorium Association recommends central state supervision over the construction and equipment of sanatoriums and that the immediate board of trustees consist of five members, especially qualified to serve, appointed by the county board but not to include in its personnel members of the county board; at least one member of the board of trustees should be a licensed physician.

In its recommendations on location and site the committee lays special stress on transportation facilities. It takes into account also city sewerage, gas, electricity, the presence of objectionable features, such as cemeteries, certain industrial occupations, etc. It recommends strongly the purchase of enough property to provide recreation space for patients and, if possible, a farm colony for ex-patients, although it opposes the purchase of farm property with a view to using it to produce an income for the institution on patient labor, with the exception that small truck-gardening and poultry establishments are permissible in connection with the industrial occupation department.

Under general construction, it advises that 20 per cent of the total capacity of the institution should be arranged for the care of acutely ill patients, and 30 per cent should be planned for patients not acutely ill but not ambulatory. Special accommodations should be made for children classified as open cases, and separate quarters for children not acutely ill. The infirmary patients should be housed in two-story fireproof buildings, and the ambulatory patients in units of sixteen in one-story buildings or of thirty-two in two-story buildings; in the two-story buildings the central portion must be fireproof. Canvas construction is advised against.

Under special construction, the committee recommends special planning for the housing of staff and employees, in special buildings when possible; rooms for the physical examination of patients, nose and throat and other treatments, laboratory use, and for the x-ray plant (every building with a hundred beds or more should have a complete x-ray equipment); a recreation room for patients where every effort should be made to do away with the institutional atmosphere, and quarters for industrial occupations (this may be included in the recreation room in small institutions); staff dining-rooms in larger institutions, and, in all institutions a separate dining room for servants; and a room for the care of the dead which can be easily and inconspicuously reached.

On the medical and nursing side the recommendations of the committee are equally explicit. The medical head of each sanatorium should be an expert in his field and he should devote his entire time to the affairs of the institution, except in cases of small sanatoriums, where the Minnesota system may be adopted; that is, the full time of one physician may be divided between two closely located sanatoriums. A resident physician should be provided for each fifty patients.

A nurse should be maintained for each ten patients, and non-graduate nurses may be employed under the strict supervision of a graduate nurse who should be in charge of the nursing department.

All large tuberculosis sanatoriums should maintain a training school for nurses, if possible in cooperation with nearby general hospitals.

The question of the necessity of employing a dietitian has been left open. The services of a steward are essential, however, in institutions of seventy-five patients or more. He should have charge of the culinary department, all its employees, and the purchase and storage of food supplies, under the supervision of the superintendent. In all institutions of seventy-five or more, a housekeeper should be employed, but in smaller sanatoriums her duties may be performed by the head nurse.

The committee is emphatic in urging the establishment of a farm colony for ex-patients. "The committee holds the view that one of the weakest links in the present campaign against tuberculosis is the...lack of management of ex-patients...The waste of public funds may be...reduced by the avoidance of relapse in ex-patients, should they be given proper employment under strict and efficient supervision."

At the same time, however, the committee opposes strongly the use of patient labor as an economical consideration in the management of the sanatorium, although therapeutic occupations are encouraged.



the fourth annual convention was held June 25, 26 and 27. Many orders from the United States and Canada were represented.

Finally, as a very important health measure, the committee urges the establishment of free tuberculosis clinics and the maintenance of a full-time visiting nurse service, by means of which cases of tuberculosis may be discovered and admitted to the institutions, and discharged patients may be kept under proper supervision.

The committees acting for the three associations included the following men: Dr. Lawrason Brown, Saranac Lake, N. Y.; Dr. Harry Lee Barnes, Wallum Lake, R. I.; Dr. E. G. McSweeney, Brockton, Mass.; Lieut.-Col. Foster; Lieut.-Col. Nichols; Dr. Robinson Bosworth, St. Paul, Minn.; Dr. George T. Palmer, Springfield, Ill.; Dr. E. VanderSlice, Ann Arbor, Mich.; Dr. Estee Nichols; and Dr. Bayard Crane, Rutland, Mass.

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#### NATIONAL TUBERCULOSIS ASSOCIATION

##### Closer Cooperation Necessary from Governmental Authorities—Tuberculosis Nurses Needed—Health Insurance Necessary to Check Disease Among the Poor

The fifteenth annual meeting of the National Tuberculosis Association was held at Atlantic City, June 14-17.

The address of the president, Dr. David R. Lyman, was devoted to the relationship of the state and national association to the other agencies in the tuberculosis campaign. Dr. Lyman stated that while the war had clearly shown the triumph of modern medicine in the control of acute infectious diseases, it had also shown with equal clearness the great inroads that chronic diseases were making in our national economy. In the attack on tuberculosis, Dr. Lyman regarded as of first importance the cooperation of the national organization with the established health authorities, local, state, and national. He felt this was essential because these authorities had a more comprehensive knowledge of local needs. He called attention to the fact that the national association has for years advocated the creation of a division of tuberculosis in the U. S. Public Health Service. Dr. Lyman urged the tuberculosis workers to take the lead in the establishment of "health councils" in their respective states who should meet with state health officers at regular periods. And since the state health departments have a much wider view of the general health situation, these departments could help the health workers in formulating their demands upon the legislatures and thereby avoid making demands without regard to the state treasury. The need of closer cooperation with the medical profession was also pointed out.

The increasing recognition of the need of educating the nurses as to tuberculosis is gratifying. Formerly, the average nurse graduated not only without any knowledge of this disease but with a well-trained fear of it. Today the best training schools are all trying through affiliation with visiting nursing associations or sanatoriums, to remedy this defect and we may look forward to the time when tuberculosis institutions may be able to engage regular graduate nurses for their work.

Dr. Lyman felt that the greatest health question before industry and labor alike today is that of cooperative health insurance. He raised the question whether it would be possible or advisable to extend the plan already adopted by large industrial organizations, so as to take the state, which is the general public, into the partnership and to insure adequate care of all health problems which may arise among those whose earning capacity is not sufficient to provide adequately for themselves.

Dr. Charles J. Hatfield, managing director of the association, reporting for the executive office, said that the past year has been the most productive in state and local work in the history of the tuberculosis campaign in this country and predicted that greater progress will be made in the next five years than in the whole history of the movement.

The Red Cross has granted the use of its emblem and the National Association will assume business control of the sale of Red Cross seals. An intensive educational campaign for the soldiers both here and abroad is going on through leaflet, lecture, and exhibit. The national association, moreover, has been acting as a clearing house from the Surgeon-General's Office to the local community with respect to the tuberculous soldiers rejected from the camps and hospitals. The association has interested itself in providing vocational training and employment for discharged tuberculous soldiers.

Mr. John A. Lapp, managing editor of *Modern Medicine*, contended in his address on social insurance that there can be no solution of the problem of tuberculosis among working men and women without health insurance. Working people cannot stop work long enough to take proper treatment because the great majority are living only a few days or weeks away from actual want. Therefore some means to enable people to stop work and to receive adequate medical treatment must be devised. Mr. Lapp suggested health insurance as the independent, self-respecting means as against charity. He believes that a proper plan of health insurance for the tuberculous should provide for payments without limitation as to time and should provide for complete medical and sanatorium treatment as long as the patient requires it.

The question of the discharged tuberculous soldier came in for considerable discussion. The program of the Federal Board of Vocational Education with special reference to tuberculous soldiers was set forth in a paper by Dr. H. A. Pattison, medical field secretary of the National Tuberculosis Association, and Dr. Samuel M. North, S. C., U. S. A., chief of the reconstruction service, U. S. A. Hospital No. 19, spoke on occupational therapy and prevocational training for men in the service. The fields of re-education in which the tuberculous soldier can be trained are severely limited but it is of the utmost importance that these fields be carefully studied and that he be given every opportunity to restore himself to civil life and economic independence.

As usual the conference included pathological and clinical sections, the former under the chairmanship of Maj. H. J. Cooper, M. C., U. S. A., New Haven; the latter under the chairmanship of Maj. Ralph C. Matson, U. S. A., Portland, Ore. One of the most stimulating addresses of the conference was delivered by Prof. John R. Commons, professor of economics of the University of Wisconsin, on "A National Health Program." Dr. Victor C. Vaughan, dean of the Medical School, University of Michigan, Ann Arbor, was elected president of the association for the coming year.

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#### THE NATIONAL CONFERENCE OF SOCIAL WORK

##### Child Welfare, American Standards of Living, and Economic Factors in Tuberculosis Discussed—Distinguished Foreign Visitors

The National Conference of Social Work, held in Atlantic City June 1-8, was replete with interest to the workers in the health and hospital field. The subject of better health and the means of attaining it were discussed in a



broad, constructive way not only in the "permanent" section on health, but also in several other sections, notably those on mental hygiene and children. Moreover, Miss Julia C. Lathrop, chief of the Children's Bureau, U. S. Department of Labor, in her inspiring presidential address on "Child Welfare Standards—a Test of Democracy," stressed the necessity for the provision of adequate care for the health and welfare of all mothers and children as an integral part of the general welfare. "For the protection of maternity and infancy," she said, "millions are needed to provide public health nurses and all the other facilities which New Zealand has long paid for and which lowered her maternal death rate and made her infant death rate the lowest in the world. If any child or any mother has the right to life-giving care, then every mother and every child has that right, though this country has not yet recognized it by such a measure as the English law of 1918, for the protection of maternity and infancy."

The division on health, with Prof. C.-E. A. Winslow as its chairman and with a well-developed program, conducted a series of informing and stimulating meetings. The standard of living was discussed in relation to tuberculosis, medical and nursing care, infant mortality, venereal disease, family food supply, housing and the health hazards of industry. Mr. Karl de Schweinitz, secretary of the Philadelphia Society for Organized Charity, in his paper on "Sickness as a Factor in Poverty," brought out some startling figures as to the importance of the sickness factor in terms of days and money lost in the course of a single year by the people of this country. Dr. Royal Meeker's paper on "What is the American Standard of Living?" combined wit and humor with valuable statistical data. He declared there was no single standard of living, but many standards, as was abundantly attested by the statistics gathered by the Bureau of Labor Statistics, of which he is the head. Dr. Edward T. Devine closed this session with a stirring speech on the "Outlook for the Future."

One of the interesting figures at the convention was Dr. René Sand, professor of social and industrial medicine in the University of Brussels. In his address on "Minimum Standards of Child Welfare," he reviewed the remarkable growth of certain health activities during the war. "No branch of social welfare in Belgium," said he, "has responded so wonderfully to the spur of war necessities as that of child welfare. Baby clinics jumped from seven to seven hundred. Five hundred cities now care for expectant mothers where there were only two before. Before the war, the providing of lunches for school children was exceptional; during the war, every school child in Belgium received luncheon every day." Another foreign guest in whom hospital people are interested was Sir Arthur Newsholme, for many years chief medical officer of the local government board of London, England. Sir Arthur took a prominent part in the International Tuberculosis Congress which was held here in 1908. He is to spend the coming year in the Johns Hopkins University School of Public Health.

The new officers of the conference are: President, Owen R. Lovejoy; vice-president, Gertrude Vaile, Denver; Rev. John A. Ryan, Washington; Robert W. Kelso, Boston; with William T. Cross continuing as secretary. Mr. George T. Nelbach, secretary of the committee on tuberculosis of the New York State Charities Aid Association, was elected chairman of the health section, and Dr. C. Macfie Campbell, Baltimore, of the section on medical hygiene.

## DEPARTMENT OF DIETETICS

Conducted by LULU GRAVES.

Please address items of news and inquiries regarding Department of Dietetics to the editor of this department, Home Economics Building, Cornell University, Ithaca, N. Y.

### OPPORTUNITIES OF THE DAY NURSERY AS A FIELD FOR SOCIAL SERVICE

**Opportunity for Dietetic Instruction to Families Living  
on Bread and Coffee—Children Improve and Interest  
Their Parents in Right Living—Personal Element is Vital**

By NELLIE M. SARGENT, Wade Day Nursery, Cleveland

Day-nursery work offers an exceptional opportunity to the trained woman of experience to get in touch with a most interesting type of social work. Since the beginning of the Great War in 1914, the day-nursery movement has been assuming more and more importance and significance. With the entrance of women in ever-increasing numbers into the industrial world, either because they are the sole wage-earners of their families, or because of the enticement of high wages to increase the family income of the man, the problem of what to do with the children of these mothers has been an important one. Are these children going to be cared for by a trained staff of workers with careful medical supervision, proper sanitary conditions, and attention to their food, or are they to be left with a neighbor woman who is too old to do anything else? Under these conditions there is no medical supervision, sanitary arrangements are of the worst possible type, and there is no lunch for the children except a chunk of bread or sweet cake wrapped in a piece of dirty newspaper, and possibly a bottle of black coffee to drink. Cleveland is one city which found and recognized these deplorable conditions in so-called "mushroom" day nurseries. In October, 1918, through the efforts of the Welfare Federation and the Cleveland Day Nursery Association, a city ordinance was drawn up to regulate the establishment, operation, maintenance, and control of day nurseries, defining them and requiring them to be licensed. An action of this nature insures the social status of the day nursery, and the standard set has been high.

Day nurseries themselves are recognizing more and more their own possibilities for results along the lines of constructive work, with both the children and mothers with whom they work. The day nursery can occupy, it seems to me, an exceptional place as a social organization. It is an institution which has an opportunity for intimate daily contact with its families. It sees both mother and child daily and, if this opportunity is being properly used, a strong influence for good can be exerted on the families under its care.

If the nursery is to be constructive in its social work, thorough investigation of each applicant coming to its notice must be made. It should be most careful in its attempt to give relief, not to aggravate any social maladjustment which will take the mother out of the home

and relieve her of the responsibility of her children when that is not necessary. Each case should be put through a clearing house in order to enable the supervisors to know what other organizations are already interested in the family. The day nursery should consult as many of these as is necessary to secure a thorough knowledge of the family situation and history. It should also recognize its own limitations in handling family problems and be ready and willing to refer the family to any other organizations which would be better fitted to handle any given family situation. A home investigation should also be made in order to understand and know the actual living conditions of the family. If there is already some other organization caring for the family and if it has referred them to the day nursery, a home investigation is not always necessary.

Nursery records are another essential to good constructive work. They should contain all necessary identifying information concerning the family and should also note important happenings as they occur during the period the family is receiving nursery care. Such notations as medical attention given to the family or any other changes which affect the situation are all important, especially when the record is reviewed as past history.

There are many opportunities for excellent work with the children in the day nurseries. The child's mind is particularly receptive; it can be trained in proper ideas of cleanliness, neatness, order, courtesy, and all the habits which go to make up character. Also, through proper medical supervision and instruction to the children in the care of their teeth and of their bodies, proper physical care can be given. This is significant because in many cases the only training and care the children get at all comes to them at the nursery. It is a very noticeable fact that often our children are much better behaved with us than when their own mothers are taking care of them. In Cleveland there are no agencies which give special attention to the physical and medical needs of children between the ages of three and six years. The day nursery can do much for the children under its supervision by noting physical defects and referring them to medical dispensaries for correction.

Another very important factor in day-nursery care is the diet. Children generally found in a day nursery are those in whose homes the lack of proper food, especially proteid, is always found. Black coffee and bread make up the bulk of the diet at home as a general thing, and, if milk is used at all, it is in very limited amounts, far insufficient to meet the ordinary requirements, or else some form of condensed milk, is used. The nursery diet for the children should be planned to make up for the deficiency at home as much as possible. In planning the diet, it is very important to consider the age and nationality of the children and to try to teach them to eat the foods to which they are not accustomed. It is not uncommon for a small child of possibly a year and a half to refuse milk simply because he is not used to it. Nursery diet should always include a liberal supply of milk, one quart a day for each child, and eggs as often as possible. Results of proper food are noticeable very quickly. It is most interesting and satisfactory to watch the improvement in the children, especially the very small ones, after a few weeks of nursery care and food. One mother who had two small children with us, came to me one day and asked what kind of medicine we gave her children, saying they had improved so much. Here was an opportunity which we quickly used to explain to the mother just how and what we gave the children to eat and the importance

of fresh milk. We found that they had had nothing but condensed milk since she had stopped nursing them. Fresh fruits and vegetables, cereals, and some meat, especially for the older children, should always be found in a properly regulated dietary.

The school children also need care and attention as well as the younger children. In some of our clubs, which have been established here at Wade Nursery for older boys and girls, it has been most interesting to notice the difference between nursery children and neighborhood children. Here is another opportunity which I think the day nursery should recognize. It trains and cares for the children, perhaps up to ten or twelve years, and then sets them adrift as no longer needing nursery care. As a matter of fact, it is just at this time when the influence of the street can be most dangerous to the child. I feel that the nursery should in no way try to be essentially a neighborhood settlement house until it has put forth an effort to carry on the good work it has already begun, by offering its former nursery children the opportunity of clubs and classes at the nursery. The interest of the children is already in the nursery if their care and training there have been of the proper kind, and it is not at all difficult to keep this interest. They naturally like to come, they enjoy themselves there, and will come and make the most of these opportunities offered after school hours. Sewing, cooking, games, etc., can all be offered as in any settlement house, but the main effort should always be to hold the nursery children, and then later, as the work enlarges and funds and workers can be increased, more neighborhood work can be undertaken if it is practicable to do so.

Last winter, the Wade Nursery tried out a very new and interesting experiment. Through the cooperation of Miss Adelaide Van Duzer, supervisor of the domestic science in the Cleveland public schools, it was arranged to have one of the cooking classes of a nearby school come to the nursery every Thursday afternoon. These girls prepare one hearty dish of high food value under the direction of their domestic science teacher. The nursery mothers can buy this food at cost to take home for their suppers. The response the mothers have made to this has been most gratifying. We do not urge or force this food upon them in any way, and it has been very noticeable, also, that often the only reason some of the foreign mothers buy is the persistent urging of their children, who like the particular dish which is on sale. With a little thought, the far-seeing effect of such work as this can easily be seen for the children, as well as its possibilities for the education of the mother.

The nursery can do much for its mothers as well as its children. It has the opportunity to be of wide service and influence. This influence can be gained at first through the natural interest of the mother in what is done for her children at the nursery. She comes to feel that the nursery people are her friends, always ready to help her in any difficulty which may come. As this confidence is established, she will ask for advice and counsel. Family troubles and affairs can often be immediately noticed at their beginning if proper attention is given to evidences of any irregularity. Many times disastrous results can be averted through wise counsel and direction of the mother to other agencies which will cooperate and assist her in her particular difficulty, agencies of whose existence she may be entirely ignorant except for the day nursery. Besides this material aid, it is possible to give what I think is often more important. These mothers need a friend, they need a word of encouragement. Often a cheery, "Well, how has the day been today?" or a similar casual



question will bring forth many things. By an attempt to gain her confidence through personal help, to solve her difficulties and bear a part of her heavy burdens, an influence can be created which is very potent and worthwhile in its effect upon the life of the family.

After the mother's confidence has been gained, much can be done in regard to ideas concerning the health, sanitation, and methods of right living of the family. The nursery house itself can set an example of order, cleanliness, etc., which will have an effect even if it is not always apparent. The educated woman has books and courses at her command and need not continue her serious mistakes. She is accustomed to standards of neatness, order, proper physical care, and other living conditions established by the customs of the circle of her friends. The uneducated, untrained woman and even the educated, trained, foreign woman suddenly placed in one of the crowded sections of our American cities, has no such advantage. She has little opportunity to learn American ways and little time to learn English. She vainly tries as best she can to adapt her peasant methods to conditions she finds here. Perhaps in her own country her standards were comparatively high, but some unfortunate family difficulty after she came here has forced her to live on a very low income. The lower her income the greater her need for the fullest training and knowledge of proper home management. The need for educational work along this line is practically universal. It applies to the young married American mother who has always done factory work as well as to the foreign mother. Very few of these women are at all familiar with the simplest principles of nutrition, which would give an intelligent choice of foods. Very few have a knowledge of comparative food values, kinds of clothing, household materials and supplies, and they have no means of knowing how to spend their scanty income to the best advantage. In many of these families the main diet for all, as has been before stated, is bread and black coffee; they buy just enough for one meal at a time. There is general neglect of the health of the mother and of the children as well. Their sleeping rooms are unventilated and the windows closed, very often as a measure to save fuel and bed covering. The nursery has the opportunity to supplement the improper diet of the children, and, through advice to the mother and encouragement by home visiting, noticeable results can be accomplished to improve home conditions. This phase of the work requires much patience and perseverance, and often a long period of time has to be covered before results are at all apparent, but the opportunity is there, and the home follow-up work can be developed and a large amount of real help given.

The nurseries may also offer the mother some opportunity for recreation. These women's lives are generally of necessity very bare of any form of recreation, partly on account of the fact of their having to work so hard and partly because they are generally too tired or cannot leave the children in the evening to go out. It is surprising what good times these mothers find in the simplest kinds of amusement. There is much need for a little play element in their lives, and the nursery mothers' parties are a source of much enjoyment. They can also be instructive as well. Last year when the call came for the use of substitutes and we found our mothers were buying flour and stacking up their shelves with the substitutes, we arranged several very enthusiastic cooking parties—with practical demonstrations. Our results were evident when some of the mothers brought some samples of their cooking to us a few days later.

To be effective and make the most of its opportunity

as a constructive social force, the day nursery must have a capable working force to give proper physical care to the children; it must have a thorough knowledge of existing social conditions, and the types of service rendered by other organizations in the community; and, above all, its most effective far-reaching results must come from the deep, personal friendship established with the mothers and families with whom it comes in close contact. I have attempted to outline some of the possibilities and opportunities which are to be found in day-nursery work for the children and mothers which come under its care, but this element of personal friendship needs a little emphasis. As a day nursery superintendent, I have found much joy from the fact that I can bring possibly just a little ray of hope and sunshine into the lives of these hard-working mothers with whom I come so closely in contact, and from the fact that the possibilities and opportunities for service to them and to the community are almost limitless.

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#### COST-OF-LIVING INVESTIGATION IN THE UNITED STATES

##### Workingman's Diet Faulty More Through Ignorance Than Poverty—Too Little Milk, Eggs, and Leafy Vegetables

BY EDITH P. NASH, Bureau of Labor Statistics, United States Department of Labor

For the past year and a half, the bureau of labor statistics, U. S. Department of Labor, has been making a national cost-of-living investigation.

From January to August, 1918, an investigation was made in all shipbuilding centers on the Atlantic, Gulf, Great Lakes, and Pacific coasts. These studies proved so valuable that the President made a larger appropriation for making a country-wide study of the cost of living, which lasted from September, 1918, to April, 1919, in all the principal industrial cities and in a few small mining towns as well. The schedules were much more detailed than for the shipbuilding investigations, hence more accurate.

The purpose of both investigations was to adjust wages. The demands of workingmen for increased wages on the ground of increased cost of living could be dealt with intelligently only by securing figures showing the increases in the cost of living.

The wives of the wage-earning men, therefore, were visited, and information was secured from selected eligible families concerning income and expenditures for the preceding year. The expenses included food, clothing, housing, fuel, furniture and furnishings, and miscellaneous items, food being by all means the most important and likewise the most difficult to secure. These schedules were, of course, only approximate as, unless the housewife kept accounts, she could not tell exactly the number of pounds of steak, quarts of milk, and pecks of potatoes she bought during the year, but the schedules were a very good estimate and the only way, in fact, of getting at the cost of living.

As to expenses in general, it took all of the earnings to feed, clothe, house, etc., the family. Fifty dollars or \$100 might have been invested in Liberty Bonds, but seldom were there savings in the bank. The average workingman's family spends practically all it makes. The amount spent on food varies, of course, with the size of the family and income; clothing, as a rule, is insufficient for winter wear; rent averages from \$12 to \$20 a month; what furniture is bought is invariably got on the installment plan; of the

miscellaneous items, those which are most important are doctor's fees, medicine, and insurance. The doctor's bill is low enough but the dental fee is even lower, for while these people's teeth need attention badly enough, they are sorely neglected until an abscess forms or toothache keeps them awake all night. The wage earner's family carries a heavy insurance, in several companies often and for each of the children, for, as the wife says "If the children should die, we wouldn't have the money to bury them."

But, as regards food in particular, I feel I can safely say that there was scarcely a single family that had a well-balanced diet, even though a sufficient amount was spent on food to provide a much more wholesome diet. Very few wage-earners' families are as well fed as they should be on their present incomes. If we examine their dietary, we will find excessive amounts of meat, white bread, potatoes, tea and coffee, with a minimum allowance of milk, butter, eggs, fruit, and leafy vegetables, the very foods which are so essential. The reason for such a diet is obvious. The husband demands meat every meal as he does hard manual work and requires heavy food, thinking meat to be the only strength-giving food. Milk at sixteen cents a quart is too high and a waste of money, not being necessary anyway for the children, so he thinks. Therefore, the children get very little if any milk to drink. The effect of such a diet on the husband is not so marked as on the other members of the family. The wife at the early age of thirty-five begins to look aged, due to improper food rather than overwork. The children, many of them, are anemic and thin, and cases of rickets and infected eyes are not uncommon.

To give a specific instance: In Baltimore I encountered a colored family with two children. The elder, a boy four, and the younger, a girl two, each had a bad case of rickets and diseased eyes, while the girl had besides these an infection on the leg, which appeared to be ulcerous. I insisted on the child being carried to a doctor, but not until I had a visiting nurse call was she taken to the hospital and given the necessary attention. With regular treatments, the ulcer healed without an operation. By corresponding with the mother I was glad to learn that the child was responding to the treatment and was much better in every way. The diet, too, moreover, had been changed, owing to the advice I had given her. Their previous diet had consisted of fat pork, chicken, white bread, potatoes, cornmeal, and coffee, with no milk, eggs, fruit or leafy vegetables. The children were fed the same foods the parents ate and in about as large quantities.

I once visited a young mother whose baby was but one week old. She complained of having no milk for the infant and, on examining her dietary, I learned that she had drunk not a drop of milk since the child had been born. Her dinner, which was served while I was there, consisted of buckwheat cakes, sausage, and tea. And then she wondered why she did not have milk for the infant!

Oh, how ignorant the public is regarding the nutrition of man! With the wage-earning class, it is not that they cannot afford the articles of food they ought to have, namely milk, eggs, and leafy vegetables, but rather their individual preference in the selection of food and utter indifference to the best body-building foods for their children. There are exceptions, which, however, are a small percentage. It is from personal observation that I speak, of the hundreds of homes I have visited and the hundreds of housewives I have questioned about food consumption, and my conclusion is this: The diet of the average workingman's family is such as to impair the health of each of its members. Most serious a problem

is it that the child is improperly nourished, and, while we cannot hope to reform the adult life in this generation, our only hope is with the children who will be the men and women of tomorrow.

To all mothers I give this challenge: Use thought in the selection of food for your child with a plentiful supply of the protective foods, milk, eggs, and leafy vegetables, milk especially, for the building of a strong body and, ultimately, a strong mind.

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#### Points for the House Visitors

The field dietitian, the visiting housekeeper, or any one engaged in house-visiting service will find the papers by Miss Nash and Miss Sargent of especial interest. The points made by Miss Nash relative to premature aging of wives and mothers is well worth emphasizing as is also the fact that indifference rather than poverty is the cause of malnutrition in a large percentage of families of the wage-earning class.

The work of the Wade Day Nursery, as reported by Miss Sargent, is but another illustration of "how far a little candle throws its beams."

The cooperation with the public schools is a good move in the right direction.

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#### TENTATIVE PROGRAM OF THE AMERICAN DIETETIC ASSOCIATION

##### Meeting To Be Held in Cincinnati in September—Interesting Discussion and Papers Planned—Good Division of Subjects

We are glad to be able to present a tentative program of the annual meeting of the American Dietetic Association, which will be held this year in Cincinnati, September 8-12. As will be noticed, many phases of the work done by dietitians is covered. Tuesday's program is devoted to the training and teaching of dietitians both in schools and in hospitals; Wednesday, the practical and executive features will be discussed; Thursday, Miss Hyde of the Cincinnati General Hospital is planning a program for the day spent there which will be profitable, interesting, and entertaining; Friday will be a day filled with things every dietitian should hear and know about.

##### TENTATIVE PROGRAM OF THE AMERICAN DIETETIC ASSOCIATION

TUESDAY, SEPTEMBER 8, 1919.

Morning, 9 A. M.: General Session.

Courses of Instruction for the Training of Dietitians, Katherine Fisher, Teachers College, Columbia University, New York City.  
Discussion led by Lenna Frances Cooper, supervising dietitian, War Department, Washington, D. C.  
Training of Pupil Dietitians, Violet Ryley, general organizing dietitian, Soldier's Civil Re-establishment, Toronto, Can.  
Discussion.

Afternoon, 2:30 P. M.: Section Meetings.

Section on Teaching—Katherine Fisher, Teachers College, Columbia University, New York City, chairman.  
Standard Curriculum for Nurses' Training Schools, Ruth Sherlow.  
Discussion.  
Section on Social Service—Blanche Joseph, field dietitian, Michael Reese Dispensary, Chicago, chairman.

WEDNESDAY, SEPTEMBER 9, 1919.

Morning, 9 A. M.: General Session.

Hospital Cafeterias, Eleanor Wells, Teachers College, Columbia University, New York City.  
Discussion led by Seale Harris.  
College Feeding Problems, Emma Baker.

Afternoon, 2:30 P. M.: Section Meetings.

Section on Administration—Emma Smedley, director school luncheons, 1425 Brandywine St., Philadelphia, chairman.  
Problems in the Administration of Government Dormitories, Olive Davis.  
Section on Dietotherapy—Minnie A. Phillips, metabolism ward, University of Iowa, chairman.  
Paper by Dr. Baumann, University of Iowa.

Evening, 8 P. M.: General Session.

What We Have Learned in Dietetics From the Army, Col. R. H. Murlin.  
Food Waste, Lieut.-Col. Ernest Irons.  
Food Clinics, Bertha Woods, Boston Dispensary, Boston.



THURSDAY, SEPTEMBER 10, 1919.

Program furnished by the Cincinnati Hospital.

FRIDAY, SEPTEMBER 11, 1919.

Morning, 9 P. M.: Business Session.

Paper by Mary Swartz Rose, Teachers College, Columbia University, New York City.

Afternoon, 2:30 P. M.

Report of the American Home Economics Association Meeting.

Report of the committee on standardization of curriculums for the training of dietitians.

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#### NEWS NOTES OF DIETITIANS

The Chicago Committee on Dietetics held a meeting in the executive offices of the chapter, April 7. The report of this meeting in part reads as follows:

"The aim of the meeting was to discuss plans for broadening the scope of the instruction in Red Cross home dietetics.

"Miss Minnie H. Ahrens, director of central division Red Cross nursing service, told of the public health peace plans of the Red Cross. The nursing service aims to spread the teaching of hygiene and home care of the sick and home dietetics all over the United States. It believes in prevention as well as cure, and feels that there is an opportunity now in the hands of the Red Cross worker to do a piece of wonderfully constructive educational work.

"Dr. Gentles, chairman of Red Cross first-aid department, told the meeting how the teaching of first aid has been carried into the industrial plants.

"Plans were discussed for developing teaching of dietetics on a bigger scale, through cooperation with parent-teachers organizations, public health community center committees, visiting nurses associations, Chicago hospitals and infant welfare associations. It was decided to make a brief survey of the work being done already in Chicago by these associations. . . . It was decided that the main thing that the dietetics department of the teaching center needs is more workers to organize classes. Suggestions as to capable workers are desired from the members of the advisory committee. People who are keenly interested in pushing the teaching of proper food values, the value of a quart of milk a day, and other essential features, are needed at once."

Mrs. Madeline F. Mehlig, chairman, dietetics committee, Chicago chapter, Teaching Center, also made this report:

"I have visited the Chicago Day Nursery Association's annual meeting and talked to them about the advisability of using the day nurseries as centers to teach the mothers the principles of nutrition. Much has been done through these nurseries in weighing and measuring the children. One nursery, the Lucy Wells School Nursery, has a model center with a dietitian in charge, directing the dietary of the children. However, I feel that not enough follow-up work is being done in this child welfare work. Little good can be accomplished unless the mothers can be taught the ways and means for caring for the health of the child.

"A letter has been sent to all hospitals not having a resident or visiting dietitian, stating our desire to cooperate in giving instruction to student nurses. Favorable replies are coming in. I have had two conferences with members of the school board on the establishment of classes for the parent-teachers association and the community centers committee.

"A series of Wednesday free lectures on the relation of food to public health was started, April 30, and a letter is being sent to all practical and graduate nurses, urging them to equip themselves with fuller knowledge of dietetics. The executive committee of the chapter has agreed to reduce the fee for this instruction to a minimum of \$2.50 for fifteen lessons. It is hoped that many will take advantage of this summer course."

Miss Marlatt, director of home economics, Madison, Wis., is very anxious to push the teaching of home dietetics in Wisconsin. She advocates the supplementing of the work of the home demonstration agent with that of the Red Cross dietitian. Miss Marlatt says there should be a distinction in the work of these two but both are needed.

The Baptist Memorial Hospital, of Memphis, Tenn., is enrolled with the hospitals desiring an up-to-date dietary department. We predict great success for them since they have placed the developing of this work in the hands of Miss Louise Stevenson. Miss Stevenson was formerly at Michael Reese Hospital, Chicago, and more recently at Camp Custer, Battle Creek, Mich.

Miss Ruth Dodge is at Woodmen, Colo., supervising the preparation and serving of the food in the Woodmen sanatorium.

Miss Ardelle Ferguson, formerly at the University Hospital, Atlanta, Ga., is now dietitian at the Pottsville Hospital, Pottsville, Pa.

Miss May Foley, who did such a commendable work at the Base Hospital in Fort Riley, Kas., has been appointed dietitian of the Public Health Hospital in Baltimore. The bureau of public health has become aware of the value of dietitians and they are planning to establish these departments on the best possible basis.

Miss Helen M. Weaver, formerly dietitian at the Woman's Hospital of Philadelphia, and Miss Louise Lauer, assistant dietitian, have left that institution to take charge of the Household Science Kitchen, 1909 Arch St., Philadelphia. This lunchroom has the novel feature that all of the cooking and serving is being done by household science graduates. The plan of operation was worked out by John B. Leeds, Ph.D., author of "The Household Budget."

#### BOOKS RECEIVED FOR REVIEW

**Clinical Diagnosis.** A Manual of Laboratory Methods. By James Campbell Todd, M.D., Professor of Pathology, University of Colorado. Fourth edition, revised and reset. Cloth, pp. 687, with 244 illustrations, \$3. W. B. Saunders Company, Philadelphia, 1919.

**Essentials of Surgery.** A Textbook of Surgery for Student and Graduate Nurses. By Archibald Leete McDonald, M.D., Lecturer on Surgery, Nurses Training School, St. Luke's Hospital, Duluth, Minn. Cloth, pp. 265, with 46 illustrations, J. B. Lippincott Company, Philadelphia, \$2. 1919.

**Re-Education of the Maimed.** By Jean Camus. Authorized translation by W. F. Castle, Surgeon R.N. Cloth, pp. 195, with 64 illustrations. \$2. William Wood and Company, New York, 1919.

**Quarterly Medical Clinics.** By Frank Smithies, M.D., F. A. C. P., Associate Professor of Medicine, School of Medicine, University of Illinois. Paper, pp. 188, with 42 illustrations and 2 charts, \$1.50. Medicine and Surgery Publishing Company, St. Louis, 1919.

**Electricity in Medicine.** By George W. Jacoby, M. D., Consulting Neurologist to Lenox Hill Hospital, New York, and J. Ralph Jacoby, A.B., M.D., Fellow of the New York Academy of Medicine, and Chief of Clinic, Neurological Department, Lenox Hill Hospital. Cloth, pp. 612, with 262 illustrations, \$5. P. Blakiston's Sons & Co., Philadelphia, 1919.

**Eminent Victorians.** By Lytton Strachey. Cloth, pp. 350, with portraits, \$3.50. G. P. Putnam Sons, New York, 1919.

**Squibb's Atlas of the Official Drugs.** By William Mansfield, A.M., Ph.D., Dean and Professor of Pharmacognosy and Botany, Union University, Albany, N. Y.; Late Professor of Biology and Pharmacognosy, Columbia University, New York City. Cloth, pp. 686, with illustrations. E. R. Squibb & Sons, New York, 1919.

**Ultra Violet Rays in Modern Dermatology.** By Ralph Bernstein, M.D., Professor of Dermatology, Hahnemann Medical College, Philadelphia; Consulting Dermatologist to The Women's Southern Homeopathic Hospital, Philadelphia; Consulting Dermatologist to Hahnemann Hospital Dispensary, Philadelphia. Cloth, pp. 162, with illustrations. Achey and Gorrecht, Lancaster, Pa., 1918.



Conducted by ANNIE W. GOODRICH, Dean Army School of Nursing and CAROLYN E. GRAY, R.N.

Please address items of news and inquiries regarding Department of Nursing to CAROLYN E. GRAY, R.N., Secretary of the New York Board of Nurse Examiners, 135 E. 45th St., New York City.

### A NEW METHOD FOR THE TRAINING OF NURSES: AN IDEA, NOT AN INSTITUTION

#### Twelve Weeks' Intensive Training in High Schools Saves Pupil Nurse a Year of Time—Theoretical Side of Nursing Better and More Quickly Taught

By WILLIAM A. WALTERS, M.D., Billings, Mont.

Stimulated by the ideas brought out in a conversation with the late Dr. Charles R. Van Hise, of the University of Wisconsin, who attended our alumni meeting at Butte, Mont., I was impressed with the thought that we were decidedly asleep in the matter of the production of nurses for our military and civil needs. We have had laborious three- or four-year courses of training for these young women in order that they might obtain their certificates of graduation, and it occurred to me during the course of this conversation that this condition could be corrected and that we had right at our elbow facilities which had formerly been overlooked in the training of nurses. I refer to the high schools.

At the close of our alumni meeting, Dr. Van Hise asked me to go to Helena and see those in authority for permission to carry out these matters which we had talked over. I went first to the governor of the state and asked to be allowed to lay the matter before the state superintendent of public education. He kindly consented. I then went to the Montana State Board for the Examination of Nurses and obtained their cooperation in this matter. They submitted the following course of instructions:

The Montana State Board of Examiners for Nurses recommend the following outline as an intensive summer course in nursing for students who have had not less than two years of high-school work.

Subject	Text books	Hours
Anatomy and Physiology—Laboratory Technique	Kimber	102
History of Nursing	Goodnow	4
Household Economics (including domestic science, cooking and household management, preparation for meals and calculation of food values)		72
Hygiene	McIsaac	6
Bacteriology (to include Laboratory Technique)	Bolduan-Garund	72
Principles of Ethics		4
Elements of Psychology		10
Sociology		8
English (including the ability to speak the English language correctly and the power to write and spell the English language in a correct, orderly, and fitting manner.)		72

Mathematics (the ability to deal with problems, including fractions, percentage, and the decimal and the metric systems)

43

Chemistry (including elementary general chemistry with laboratory practice, also household chemistry)

Pope

36

Public Sanitation, to be taught by health department, either state or local

3

A resolution was passed by the State Board of Nurses Examiners to recommend to the nurses' training schools of the state, that they give one year's credit to the young women presenting certificates that they have successfully completed this intensive summer course.

Girls cannot be admitted to the nurses' training schools of the state until they are eighteen years of age, though the intensive summer course may be taken earlier.

Studying this list of subjects, we found that much of the didactic work in the curriculums of these various hospital training schools could be taught very readily in our high school. We found that we had better facilities in the high school for teaching the fundamental subjects such as chemistry, anatomy, physiology, dietetics, and biology than were to be found in the average hospital, and we decided that the preliminary training for these girls could be better done in the high schools than in the hospital.

Why can't our high schools prepare women to be nurses just the same as they prepare them to be stenographers or bookkeepers? The buildings are idle in the summer and so are the instructors and scholars. Now is no time for slacker capital invested in high schools and also no time for slacker students or instructors. These are busy days of reconstruction. Let us standardize our courses for nurses just as we have our dollars, so that they will be the same anywhere in the United States.

The work of the high schools, of course, had to be standardized so that the young woman who took training in Billings could, if she chose, take her credits to any training school in the state and receive recognition. We formulated a course of study occupying approximately six hours a day and lasting for twelve weeks which prepared our young women very well to enter the hospital and take up the so-called "practical duties" of nursing.

This experiment was begun at the opening of our summer vacation period. In conjunction with this course, there was a night-school course of home nursing which was more practical and was intended for the women of our community who had little or no educational advantages. This course was later absorbed into the first-aid course which was given by the Red Cross and, needless to say, it became very popular. We found that our women were eager to learn how to make a bed, to bathe a patient, put a patient to bed, how to take temperatures, and how to give enemias, etc. A number of these women qualified as nurses' aids and went overseas in that capacity. A great many of them remained at home and were a godsend in the subsequent influenza epidemic which so terribly devastated the community.

It occurred to me, in this connection, that a standard course of instruction could well be adopted by the high schools throughout the United States so that a young woman could receive her preparatory training in the fundamental sciences and then enter her course of training in any hospital with a standard list of credits and a much fuller idea of the work ahead. I believe that hospitals throughout the United States would welcome a class of women who were properly prepared to enter their institutions and undertake intelligently the practical side of nursing.



Under our present methods of teaching nurses, we have taken young women with the average educational attainments and have put them in the menial work of the hospital training schools as probationers for the first six months. In many instances ambition has been stifled in them when they were made to mop floors and polish brass and do other duties that are entirely out of the realm of nursing in any manner, shape, or form. Another fault in the old system is that the young women in the training schools of our hospitals received their class-room instructions after supper. They are tired out with the efforts of the day and it is hardly to be wondered at that the work is not properly received by them. By the plan we devised, the girls are taught in the daytime in bright, cheerful surroundings and by a group of instructors who are far better equipped to teach these subjects than the average practitioner of medicine, and the students get a great deal more out of their work in a much shorter time. The average high-school instructor in science knows more about the chemistry he is teaching than the average practitioner does, and we found under the old methods that our girls were being taught subjects by physicians who had not studied them since leaving school. They were teaching these subjects in a very indifferent manner and in a very meager way to a group of girls who were entirely too tired to receive the instructions profitably, to say nothing of the instructor being too tired to teach his subject well. Again, it often happens that the physician could not leave his work to lecture at a given time and consequently the entire class would go without instructions and be dismissed.

Our experiment proved that we were right and that the pupils learned in a period of twelve weeks' time virtually all of their fundamental sciences and learned them better under this system of high school instruction than they would have learned them under the instruction of the general practitioners who were rusty in the work and who were attempting to teach a group of girls who were literally tired out.

Most of the work was taught by the instructor of science. The course in domestic science and dietetics was taught by the domestic-science teacher. The courses were so arranged that one teacher taught her subject for full days for a few weeks until it was finished, when another teacher took her place. In this way no teacher was obliged to stay the full summer term, but each one left for vacation as soon as her subject was finished and consequently obtained the major part of the summer for her rest.

We have incorporated with our high school work a practical course of nursing for the girls in the upper classes. These young women are taught by our school nurse the principles of practical nursing, and we hope by this means to encourage more of these young women to undertake this intensive course of training and go on through hospital work.

The cost of this training was borne by the community, as it should be. Our local board of education was certainly most generous in furnishing us with instructors through the summer time, and we found at the close of the session that it had cost the school board a very reasonable amount to prepare a group of girls who had actually saved themselves one year of their lives in training to become graduate nurses. This twelve weeks of instruction gave them one year's credit in their course of training. The state board of nurses were quick to see the great advantage of preparing nurses in this way in a short time for the nation's need and should certainly be thanked for their hearty cooperation.

#### CONSERVATION THROUGH CORRELATION OF EXISTING AGENCIES

##### The Dream of a "Central School" To Be Partly Realized Through Cooperation With Existing Centers—Hospital and High Schools Should Serve the Community Together

The idea presented in Dr. Walters' paper (published above) is not new but the fact that the idea was translated into action is both interesting and gratifying. In nursing, as in other departments of education, we need ideas, and, still more ideas that are successfully worked out, for we already have too many institutions, not alone of brick and mortar, but of precedent and tradition, and a too great reverence for the way "things always have been done."

The scheme Dr. Walters has outlined has some points in common with the Vassar experiment. However, the latter was for college graduates, and the use of the college property was a war contribution, possibly of too great value to be expected in peace time. But practically every city of any considerable size has one or more hospitals with limited facilities for laboratory teaching, which are struggling with the problem of providing scientific education for pupil nurses; and has also high schools equipped with laboratories that are in use usually not more than half the time.

The growth of nursing schools has been so rapid and the difficulties nurse instructors have had to overcome in order to secure adequate preparation to teach the many subjects required in a modern curriculum, have been so great that the available number of properly qualified instructors is all too small to meet the demand for their services. Consequently, we have many schools ready and willing to employ qualified instructors that cannot obtain them. This group, plus a still larger group of schools that cling to the tradition that doctors are qualified to teach any scientific subject and can usually be depended upon to give such services gratis, would be immensely benefited by cooperation with existing high schools that possess adequate teaching facilities and properly qualified teachers.

One of the dreams of many of the leaders in the nursing world has been of a so-called "central school," where the prospective training-school pupils from a given area could take their preparatory work and enter the nursing schools ready to take up the practical work. There seems to be no reason why existing high schools cannot serve many of the purposes of the "central school" until such time as the growth of hospitals makes the demands on the high schools too onerous. Naturally, strictly nursing subjects can be taught in the hospital to better advantage, but scientific subjects, i. e., biology, bacteriology, chemistry, physics, dietetics, etc., could be taught to larger groups in better-equipped laboratories and by better-prepared teachers than they are at present in the average hospital with average equipment and the average type of instructor. This statement is true not only for nurses in the preparatory period, but for those in the junior, intermediate, and senior periods as well, as it is neither practical nor desirable from a pedagogical standpoint to crowd all of this instruction into the preparatory period. Much of it should be correlated with the practical experience the pupil gets in the hospital, and, to be of the greatest value, should be given as nearly as possible at the same time.

One of the objections to such a scheme has always been that it took too much time for the pupils to travel to and from the high school, but now that we are being forced to admit that the hours of duty exacted of pupil nurses

are unreasonably long and must be shortened, it is possible that this objection will not carry so much weight. The advantages would be not only better teaching, better facilities, and standardized instruction but also a profitable mingling of students from various nursing schools, which would in time help to break down their "splendid isolation." It would mean also a saving of expense by those schools which give their pupils such instruction as is worth paying for and a marked improvement in the quality of the teaching given in schools that depend upon the volunteer services of those who are not primarily teachers. It would seem not only possible but highly desirable that these courses of instruction should be standardized to the extent that a student who resided in Montana might have her preliminary course recognized not only in any city of Montana, but in any city of any state, for instance, Illinois or Massachusetts, and thus be able to enter a nursing school located in Chicago or Boston.

Without doubt hospitals would welcome classes of pupils so prepared, particularly just now when from many quarters one hears of a dearth of applicants and a lack of interest now that the "war motive" cannot be used as an incentive. Many of us know, to our sorrow, that the work required of pupils does stifle ambition and often drives valuable recruits from our schools. Yet when superintendents protest against this work being required longer than is necessary for the pupil to learn the necessity for it and the routine for accomplishing it, we run counter to the tradition that any hard or disagreeable work that the hospital requires can be done in the best and cheapest way by turning it over to the pupil nurses and making it a responsibility of the training school. Not alone mopping floors and polishing brass but many other duties are required long after every atom of educational value has been extracted and the period of drill necessary for acquiring skill is long since past.

It is a pleasure to testify that most schools have discontinued night classes, and it ought to be a comfort to those who are struggling with the problem of introducing the eight-hour day, to remember that at one time the abolition of night classes was considered quite "unnecessary and impossible."

It is of interest to note that the cost of the experiment in Billings was borne by the community; this strengthens our belief that the proper education of nurses and the content of what that education should be are of vital interest to the community and should be determined not by any one institution or group, but by all the citizens of the community which hospitals and nurses both exist to serve.

Perhaps a concrete example of possibilities in this connection may clarify the points of this discussion and the example of the municipal hospitals of New York City may serve this purpose. For the benefit of those not familiar with the complexities of the municipal hospital problem in New York, the departments under which these hospitals are grouped may be outlined as follows:

1. The health department maintains hospitals for the care of communicable diseases, i. e., scarlet fever, measles, diphtheria, smallpox, tuberculosis, etc. These hospitals do not have training schools but instead depend upon graduate nurses. They are frequently short of nurses and try to attract postgraduate students as well as to obtain affiliating pupils from training schools. The health department also has a staff of school nurses and a staff of nurses for visiting cases of communicable diseases. The latter is the nearest approach to a municipal visiting nurse service the city now has.

2. Bellevue and Allied Hospitals, i. e., Fordham, Harlem, and Gouverneur, are managed by a board of trustees which consists of seven unpaid men, appointed by the mayor for a period of seven years. Bellevue Hospital maintains a training school and gives the pupils a broad and varied service. At the three Allied Hospitals the nursing is done partly by postgraduate students and partly by affiliated pupils from a large number of small schools that cannot within their own hospitals provide the variety of services required for the all-around training of a nurse.

3. The department of public charities has charge of a number of hospitals, in four of which training schools are conducted, i. e., King's County Hospital, and Cumberland Street Hospital, Brooklyn; and City and Metropolitan Hospitals on Blackwells Island.

From this, it will be seen that the city of New York conducts at least five separate schools for the education and training of nurses. Each one is separate and distinct, maintains its staff of instructors, gets as much equipment as it can, and prides itself on the fact that it is not connected with any other school!

In addition, the city of New York has an education department with many high schools and, at present, there is no connection whatever between the nursing schools in the various hospitals and the high schools. Yet they are all city institutions, supported by the taxpayers, and designed to serve the interests of the community. Suppose we allow our minds to play over the possibilities of the various departments coming together and combining forces so that one big nursing school instead of five small ones would serve the hospitals. Then imagine, if you will, an elective service in communicable diseases being provided by the hospitals of the health department and also a public health service being provided by an extension of the school and visiting-nurse departments. Then think of tying up this big nursing school with the educational system so that all the sciences would be taught in the high schools. This would bring the hospitals and schools into a close relationship that would doubtless prove of value, not only to the hospitals, but to the high schools, for the hospitals should not be parasitic in their relation to the high schools but should offer their best facilities for health teaching and prevention of diseases to high-school pupils.

One wonders if in some such way as this sketchy outline indicates it would not be possible to build up a big nursing school that would offer such sound scientific education, such varied training, such a wealth of elective services, combined with such unusual opportunities for the study of social problems, that it would attract sufficient students to relieve the chronic shortage of nurses in our municipal hospitals and help to meet the demand for properly prepared public health nurses. It seems not too visionary to think of such a nursing school being a leader, and the poor of the city being better cared for under this system than is possible under conditions that today make it difficult to attract even the minimum number of pupils to our nursing schools.

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#### Public Health Service Nurses Wanted in Montana

Montana has issued a call for more public nurses. In connection with Surgeon-General Blue's recent statement that there should be a public health service nurse at work in each county, statistics indicate that Montana falls far short, lacking sufficient nurses to supply even one-third of its counties.



## THE MODERN TRAINED NURSE

**She Must Have More Special Training and Be in Closer Touch With Social Service Work—Time to Be Given Through Eight-Hour Day and Freedom from Housekeeping Detail**

By MAUDE McLEOD, Superintendent of Nurses, Vancouver General Hospital, Vancouver, B. C.

The nursing profession was called into existence by the real needs of suffering humanity. It is the only profession women can claim as their own. It is a profession exalted by intellect and culture. Yet we are told that there is something wrong with the training schools of today.

The doctors claim that the trained nurse is not efficient. Superintendents of training schools say there is something wrong, and the lay public finds something radically wrong. If we could come to a satisfactory diagnosis of the case, I am sure among us we could establish a training school capable of training women such as John Allen described as "not existing on this side of the pearly gates."

I am not going to inflict upon you a history of the progress and growth of the nursing profession. Sufficient to say that the Montreal General Hospital can boast of the first training school for nurses in Canada. This school was opened in 1890, and Dr. R. E. McKechnie, of this city, was among the first to lecture to the nurses. In the United States, the training school dates back fifty years, and during these years it has made rapid strides. A number of these schools now have university affiliations, preliminary courses, and almost all have paid instructors.

The duties of the student nurse in the large general hospital are quite the same as those in the small general hospital, so that if we have anything to offer for the information of the one, the same would be true of the other.

We shall consider first the relation of the training school to the hospital. Quite a number of training schools are organized under a separate charter, and operated under a different board of directors, and kept in every way completely apart from the hospital, except that the pupils in the training school are employed by the hospital under certain conditions to nurse the patients. The Illinois Training School of Chicago is an independent institution. The student nurses get their practical training in the Cook County Hospital on the basis of affiliation. In this instance, the plan has proven a success. There are several training schools under university management. In these schools the practical training is given in the hospital, while the university controls the other educational details, and the university, not the hospital, authorizes the graduation and issues the diplomas.

Any connection, however, of a hospital training school with a university, inevitably leads to the addition to the training school curriculum of an increased amount of purely technical work. This presents a problem of far-reaching significance. It must be appreciated that in her future profession, the earning capacity of a nurse is limited, and the remuneration ordinarily received not very high. Too much technical information in the training school is therefore not warranted by the subsequent remuneration which is to be expected.

Many hospitals are getting away from the ten-hour day which used to be in vogue. Recent investigation regarding the effect of fatigue upon efficiency has shown that after a ten-hour day the efficiency of the worker greatly diminishes. It would seem best, therefore, to reduce the time on duty per day from ten to eight hours. If this were done, then a sufficient amount of time would be available for the increase in technical work which would be required by

university affiliation. More time for the purely nursing part of the training could also be obtained by eliminating from the duties of the pupil nurse the ordinary housekeeping duties in connection with the wards. It has never seemed reasonable to expect pupil nurses to entirely assume all the housekeeping duties which usually are connected with hospital wards. These duties might better be undertaken by ward attendants or helpers who would receive adequate remuneration for the work they did. In this way the pupil nurses would be relieved of the monotony of doing certain tasks continuously throughout their training, which in reality have little or no bearing upon the actual teaching or learning of their profession. If such a procedure were adopted, more time would be available for the proper instruction in the actual principles and practices of nursing, and the pupil nurse would be in a more receptive mood for study.

Other changes in the curriculum of the training school might be considered. It must be appreciated that this is an age of specialization. The demand is becoming more and more acute, not for the nurse with general training, but for a nurse who is qualified along special lines. For instance, it is of no particular value to a surgeon that a nurse is a fairly capable general nurse. What he wants is a nurse who has special training in surgery. So too with the other specialists in medicine. According to the methods of training now in vogue, any specialist nurses are developed after they leave the training school from which they have been graduated. All their training, therefore, in their specialty is undertaken without supervision and at the expense of the practice of their profession. How much better it would be if the various training schools would undertake to give the course in the specialty either as a part of the undergraduate course, or as a distinct graduate school.

If the changes already suggested in relieving the pupil nurse of some of her arduous work were adopted, it would be possible to find time for a more or less intensive course in a number of specialties. It must be appreciated that more and more a new field of opportunity is opening not alone in the special branches of medicine, but in some of the more closely related sciences, especially those related to public health activities. It might be possible to give courses which would fairly well qualify nurses to act as assistants in the x-ray department of the hospital, in the hospital laboratory, in a training school administration, and in the social service department. In the majority of Canadian hospitals, the student nurse receives no training in the social service department. She gets her practical training in the wards of the institution, but has no actual knowledge of the conditions which have placed the ward patient in the hospital. Today all nursing work points towards educating the public to avoid causes of disease, rather than toward alleviating the suffering. This branch of the work should be given a place in the curriculum of our training schools. The nurses should be graded in the work, and an examination given. One worker in the social service department could give eight or ten lectures to the pupil nurse in her second year, and as well the pupil nurse could spend one or two weeks in the social service department visiting poor families, thus learning the causes responsible for sending the patients to the hospital. Other special branches demanding workers in their particular line are diseases of infants, infectious diseases, school nurses, visiting nurses, etc. It would seem that it might be possible to rearrange the work in the training school so as to allow the pupil nurses to elect any one of the special branches for the intensive

work in the last six months of their training. In this way, specialist nurses would be developed to meet the demand which is surely coming in a very urgent manner.

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### A SURVEY OF THE NURSING QUESTION

#### An Eight-Hour Day, Cooperation of University and Training School and Affiliation of Smaller Schools with Greater, Ward Assistants, and Physical Examination of Nurses the Most-Needed Reforms

BY M. T. MACEACHERN, M.D., C.M., Superintendent, Vancouver General Hospital, Vancouver, British Columbia

#### FOREWORD

The hospital administrator today finds that his management resolves itself very readily into the three main divisions, medical, nursing, and business. Although these divisions must have separate responsible heads with much different, and clearly defined, policies and activities, and though they can be discussed separately, yet there must be a very intimate connection existing between them in order to make a well-balanced, complete, and efficient management. The remarks, therefore, that follow are directed to the nursing phase of hospital administration, and though my remarks are based entirely on information gained from personal experience and study of the problem—partly from information gained elsewhere, but mostly from local conditions—and though geographical location finds us situated in the far West and in a young country where there are many new questions to solve, yet I hope the practical application of some of the thoughts contained therein may find place elsewhere, as it has in our institution.

#### INTRODUCTION

It is not wisdom for any superintendent of a hospital, other than a nurse herself, to say much about the nursing profession or venture suggestions or outline policies of development such as I propose doing in this paper. However, it has been my privilege as the administrative officer of a large institution to give this subject much consideration and deep thought, and this, let me say, has been of great pleasure to me as I have always been keenly interested in the nursing profession.

I believe that our hospitals are efficient only so far as our nursing and medical services are efficient. I do not think for one moment that the nursing profession is by any means perfect, but I must say that the advances made in recent years are marvelous; the great part played in the recent war has never been excelled, and I doubt if it ever can be in time to come. Still, there is constructive and reconstructive work to be done and the next few years undoubtedly will see many scientific advancements in the nursing service of our hospitals. In this paper, therefore, I desire to throw as much light as possible on some of the problems arising today which must be wisely solved if the right advancement is to be made.

Investigation of the entire question reveals a number of problems upon which we can well deliberate for a few minutes. The problems are, long hours of duty, need of higher education and broader training standards, shortage of nurses, and the physical health of nurses. The above conditions form a basis for this paper which I cannot deal with in full at the present time, so I intend to touch upon them, only. All these have been dealt with in full recently in my report to the board of directors of this hospital, and have since been acted upon in many instances.

From the above it readily appears that five great questions arise, and we will deal with them in this order: The

eight-hour duty; the training school and the university; the postgraduate and affiliated courses; the ward assistant; and physical examination of nurses.

Before commencing the discussion of any of these I want to quote a paragraph from a paper entitled "The Modern Trained Nurse," given by Miss M. MacLeod, superintendent of nurses in this hospital, before the British Columbia Hospital Association Convention, which reads as follows:

"Many hospitals are getting away from the ten-hour day which used to be in vogue. Recent investigation regarding the effect of fatigue upon efficiency has shown that after an eight-hour day the efficiency of the worker greatly diminishes. It would seem best, therefore, to reduce the time on duty per day from ten, to eight hours. If this were done, then a sufficient amount of time would be left available for the increase in technical work which would be required by university affiliation. More time for the purely nursing part of the training could also be obtained by eliminating from the duties of the pupil nurse the ordinary housekeeping duties in connection with the wards. It has never seemed reasonable to expect pupil nurses to assume all the housekeeping duties which usually are connected with hospital wards. These duties might better be undertaken by ward attendants or helpers who would receive adequate remuneration for the work they did. In this way the pupil nurses would be relieved of the monotony of doing certain tasks continuously throughout their training, which in reality have little or no bearing upon the actual teaching or learning of their profession. If such a procedure were adopted, more time would be available for the proper instruction in the actual principles and practices of nursing, and the pupil nurse would be in a more receptive mood for study."

This paragraph has a great deal of bearing on much of the thought which I have tried to elaborate in the following pages, and indeed the whole paper from which the paragraph is taken is well worth your reading and consideration.

#### THE EIGHT-HOUR SYSTEM

The eight-hour duty system which is carried out in several hospitals today, first met with considerable opposition which readily fades away on consideration of the efficiency curve of the nurse and the work curve of the institution.

In regard to the first of these it is agreed that human efficiency wanes after an average of eight hours' continuous duty, and, from our own personal experience, there is no need of further argument regarding this. It is also agreed that resistance to disease drops with fatigue. This latter condition is, of course, a very serious one for a nurse, as her resistance to disease is her health asset. The former condition is very serious to the institution, which at all times needs efficient service.

Similarly, a study of the work curve of a hospital, as this is, so far as it affects the nursing side, indicates clearly that the "peak load" so to speak, is from 6:30 a. m. to possibly 2:00 p. m., when it gradually wanes till from 5:00 to 7:00 p. m., when there is a slight rise owing to so many cases coming in for operation next day. After this the load gradually drops till midnight, when it falls to its lowest and remains down till 6:30 a. m., or thereabouts, when the cycle commences again. The application of the eight-hour system seems to be more suitable therefore than any other system in such a case. If there are sufficient nurses a divisional basis of 50 per cent, 25 per cent, and 25 per cent of total number of nurses might be used, thus:

7:00 a. m. to 3:00 p. m.	50 per cent
3:00 p. m. to 11:00 p. m.	25 per cent
11:00 p. m. to 7:00 a. m.	25 per cent

After conferring at length with our superintendent of nurses on several occasions and after a close study of local



conditions, we decided upon the following system as practical and efficient:

7:00 a. m. to 7:00 p. m. with four hours off daily, besides the usual half-day and Sunday hours.

3:00 p. m. to 11:00 p. m.

11:00 p. m. to 7:00 a. m.

This modification was made on account of the shortage of nurses and because we were very desirous of first improving the hours of night duty. We cover the entire nursing service with the same number as formerly. This scheme would have been introduced on October 1, last year, had it not been for the epidemic of influenza because of which it had to be deferred for a few months till all the nurses were back again and recovered from the effects of the epidemic. The arrangement naturally provides advantages on both sides—to the nurse and to the institution.

By this system the nurse has more time for recreation and study. Nurses coming on at 3 p. m. have had a night's sleep and almost an entire day off, whereas those who come on at 11 p. m. have had a very long evening to themselves. As to the effect on the health of our nurses, I can not make a definite statement, but I believe that we have had very little illness since the epidemic, which, of course, delayed the introduction of the system.

As to the advantage to the institution, I feel sure it produces a more efficient nursing service, and on the whole we are very pleased with it. During the coming year we hope to take a step further, inasmuch as we will endeavor to separate the lectures and demonstrations, as far as possible, from the duty hours. Possibly a six months' preliminary instruction period, both theoretical and practical, for all nurses coming in, will be introduced, by which a large number of the classes will be covered before the ward nursing service commences. This will be dealt with later in this paper.

#### THE TRAINING SCHOOL AND THE UNIVERSITY

The attention of leaders in the nursing profession is now directed to the linking up of the training schools with the higher education or bringing them closer to the universities. Towards this end we have taken a definite step here, and in dealing with this question in my recent report I was prompted by several motives: First, the recognition that the nursing service today is expected to enter much broader fields than formerly, such as public health, sociology, etc., and that more and more is demanded of nurses so that a broader education is needed; second, the wish to elevate the nursing profession to the highest possible plane by drawing our training schools closer to educational development and present-day advances; and third, the hope of establishing more readily leaders in the nursing profession.

When complete summary of the whole question had been made, it was then recommended to the University of British Columbia: First, that a college of nursing be established with a faculty; second, that a degree be granted on completion of the requirements to be laid down later; third, that through the college of nursing or department of nursing in the university, supervision be kept over our training, theoretical and practical.

After considerable negotiations with the education authorities of the university, and after they had given the matter due consideration with investigation of conditions elsewhere, they made the following recommendations: First, that a department of nursing be established under the faculty of science; second, that a degree be granted on the fulfillment of the following conditions—two years of arts or a preparatory course, and completion of three

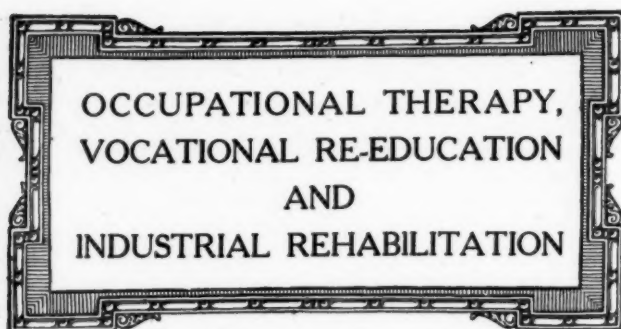
years' training in a recognized training school, the required standard of training schools to be laid down later.

It is further hoped that the directress of nursing of this hospital may be head of that department, if she is properly qualified, and that these required qualifications will guide us in our selection to fill the present vacancy. It is further desirable that all our nursing instruction be put, as much as possible, under the supervision of the department of nursing in the university. In due course there will therefore be two nurses, holding different standards, graduating from our hospital training school, yet both having the same practical training course. The first will hold a diploma from the hospital and a degree from the university which may be either "Bachelor of Nursing" or "Bachelor of Science of Nursing." The second will hold a diploma from the hospital only. The first will probably follow an institutional career or become a leader in her profession. Possibly she may take charge of a smaller training school or follow public health, social service, research, or other broader fields. The second will most likely follow the art of skilled nursing, an equally important post and one which today is demanding thoroughly well-trained nurses; that is to say—the young woman coming into this hospital to train, having two years' credits in arts or the equivalent, or higher, can secure the degree on completion of her practical training here, but the young woman coming in with less than this requirement will not get the degree but will secure exactly the same training for nursing as the other will get. The present-day requirements of this hospital for admission to the training course is three years' high school or the equivalent, and we trust that the day will soon come when we will demand the degree admission requirement to the course. Not only is it an advantage to the nurse herself to raise the standard, but it stimulates higher education, and, by this present university arrangement, high-school and normal-school girls who are not of age to come in to train can continue their studies in the university, preparatory to taking their course. The complete details of this new system are not yet fully worked out, but undoubtedly will all be completed by October.

In regard to the three years' training in the hospital—the first six months will be spent in intensive and concentrated instruction, both practical and theoretical teaching, the practical teaching will be carried on through demonstration and on the human subject, so that at the end of the first six months the nurse will be well equipped to assume ward duties and do her duty with a good knowledge of it.

For those desiring the degree, therefore, it will be seen that five years must be spent, and as mentioned before, many young women attending the high school can continue their studies direct into the university, making their education and training continuous. Two years' university or academic work will be equivalent to two years in arts, and it is planned that specially arranged courses may be had which will have a particularly beneficial bearing on the future technical education to be secured, thus a widened, sounder, and better foundation will be laid for the practical training to follow. Possibly such subjects as English, psychology, biology, chemistry, household economies, dietetics, etc., will be taught. This, therefore, is not only a great boon to the nursing profession but allows the university to extend its service in another direction and enter an extremely useful field. In addition, there is no doubt that this arrangement will have a stimulating effect on all our training schools in this province in making them adopt higher standards.

[To be continued]



Conducted by DOUGLAS C. McMURTRIE, Director Red Cross Institute for Crippled and Disabled Men and ELIZABETH G. UPHAM, Advisor in Occupational Therapy, Milwaukee-Downer College.

### HOW THE DISABLED MAY WRITE QUICKLY AND WELL

#### A Number of Means of Writing Which Have Been Found Practical by Men With Disabled Arms—What Determination and a Right Method Can Do

By EMMANUEL CHASTAND, Director Municipal School of Crippled Soldiers, Nantes, France

In our hospitals I have often witnessed the touching sight of a young woman bending over the bed of a wounded soldier and writing at his dictation a letter to a mother, wife, or betrothed. The wounded man was certainly grateful to the nurse for her services; he was glad to be able to inform his beloved ones of his health; but how much happier he would have been, could he have written himself, and how much sweeter, tenderer, and more intimate would have been the letter!

One of the first desires of a soldier wounded in the arms or hands is to write home. He prefers to do it himself, even awkwardly, in pencil, so that he may express himself freely. Many men with a disabled right arm or hand have just for this purpose begun to train their left hand, and their progress with such an incentive has always been rapid. Not all succeed in writing perfectly, for there are certain principles to be observed in left-handed writing, but all are able to write legibly.

But beside these soldiers disabled in one arm or hand are those who have lost both hands or whose two arms are seriously crippled. These are among the most pitiable victims of the war; they will always be more or less dependent on others, whatever progress may be made in the invention of practical artificial arms. One of the first trials experienced by a man who has suffered an arm amputation is his discovery that he cannot smoke or write without the help of a nurse or comrade.

The object of this article is to describe some very simple devices by the aid of which men with amputated or injured arms or hands can learn to write quickly and well.

We must remember that the simplest appliance is always the best. Often we search long for a complicated device for some operation which could easily be performed by a much simpler method. Let me cite the case of a soldier with both hands amputated who during three months at a military hospital dictated all his letters. Three days after his admittance to the reeducational school at Nantes, he wrote with a pen his first letter to his mother, thanks to a simple rubber bracelet placed around his wrist.

The devices which enable a man to write vary with the nature of the injury. Here I should say that the disabled man should always practice with a pen. A pencil will be easy for him afterward, while the use of a pen causes difficulties when a man has learned with a pencil. The

principle which is at the base of all intelligent prosthesis is that the instrument which the injured man is to use should always be as near as possible to the controlling stump. On the closeness of connection between the pen and stump often depend the facility and quality of the writing. Whenever possible, therefore, we must try to avoid intermediate, inert apparatus. If it is possible for the penholder to be manipulated by living muscles, no prosthetic appliance should be used.

Let us consider first the man whose only hand has lost the thumb. In his case the penholder must be held between two of the fingers, preferably between the first and second, or if these should be injured, between the second and third, or when necessary, between the third and fourth. In the case of a man who has lost all the fingers of his one hand, the thumb must be used; if there is only one remaining finger, that must be used. One can learn to write well most quickly with the index finger, then with the second, and then with the little finger. The third finger is the most rebellious, but in case of necessity it must be put to work.

In order to use one finger in writing, it is only necessary to attach a pen to it by a rubber ring about two centimeters wide. A long pen can be more securely fastened. If it is impossible to obtain a long pen, one may be lengthened by being inserted between the branches of a paper clip. The patient must be careful to place the point of the pen as near as possible to the end of the finger. The pen point and the finger should be in the same line. Then the man may go to work as if he were writing with the end of his finger on a board covered with dust; the pen will obey faithfully. He may, if he prefers, fasten a penholder to his finger in the same way, but I would advise him to cut it off so that the end of the handle fits in the joint of the second phalange. According to the kind of writing that he desires to do, the crippled man may give the pen point any angle he prefers.

We will now examine various cases of men who have lost both hands. Take the man with a double amputation at the wrist or perhaps one-third up his forearm. He tries at first to write by holding his penholder pressed between his two wrists. It is a bad method, for it necessitates the movement of the whole upper part of his body with every stroke, which prevents his acquiring any speed. A simple rubber band around the forearm will hold the penholder in an almost normal position and leave the second arm free to hold the sheet of paper in place. By this method a pupil in one of the higher commercial classes of the reeducational school at Nantes can easily take all the exercises in dictation. A man with no hands and only one arm may proceed in the same way and have his paper held by a paper weight. His copybook or paper must be placed before him in the proper position in order that his writing may have a normal appearance.

These are the more fortunate of the men with double arm amputations. For those whose arms have been taken off at the elbow or a little above, the problem is much more difficult and can only be solved by the exercise of all the wounded man's will power. Through determination men with only part of the upper arm left have succeeded in writing with a penholder attached to the stump. To do this they stand at a high table which comes almost under their armpits, so that the arm is horizontal and parallel with the table. It would be useless to claim that those whose injuries oblige them to write in this way succeed in writing perfectly and easily, but there are persons living so disabled who have important letters to write too private to be dictated, and I believe I have indicated a



method which may render them some service. Men with a stump less than two-thirds the length of the humerus or with no stump at all cannot by any effort learn to write.

If sometimes disabled soldiers, obliged to practice writing like children, become discouraged, let them think of the poor fellows who have only a short stump or whose arm has been disarticulated at the shoulder, and they will soon realize that their own is the more preferable lot.

\* \* \* \*

#### PHYSICAL RECONSTRUCTION IN A TUBERCULOSIS SANATORIUM

##### Occupational Work Is Primarily Curative—Has Demonstrated Its Success—An Effort Is Made To Link It Up with the Man's Old Job—Important in Keeping Up the Hospital's Morale

By PHILIP M. CONLEY, Second Lieutenant Sanitary Corps, Chief of Educational Service, United States Army General Hospital, No. 17, Markleton, Penn.

The work of physical reconstruction in tuberculosis hospitals is designed to be fundamentally a curative measure. Its object is to build up the body physically, afford informational subjects to occupy the minds of the patients, and at the same time give recreational facilities. Ward surgeons are required to prescribe one, two, three, or more hours a day of reconstruction work just as they prescribe medicine or anything else for the betterment of the patients. Prescriptions are made weekly so that, in case the patient is not doing well physically, he may be relieved of some of his work or his work may be entirely changed. In case the patient is doing well his work is increased.

All patients who are able to do reconstruction work in this hospital are quartered on two large wards. As soon as the patient is transferred to one of these wards, he is ordered to report to the reconstruction office. Here the psychologist makes a survey of his educational qualifications and of his previous occupation. He tactfully finds out what the man is capable of doing and what he hopes to do when he is discharged from the hospital. When we have this information at hand, the patient is assigned to certain classes which will be of benefit to him when his disease is arrested. We attempt always to have the man select his own course of study. He is made to feel that everything planned for him will assist in his cure and will also be of value to him when placed upon his own resources.

The course of study is arranged with the idea in view of aiding men in occupations which will not interfere with their physical condition. The course of study is as follows:

*Commercial Department.*—Bookkeeping, cost accounting, typewriting, shorthand, business English and correspondence, business law, and multigraphing.

*Auto Mechanics Course.*—General repairing, roadside repairing, driving, vulcanizing and acetylene welding.

*Woodworking.*—Carpentry, cabinet making, and repair work.

*Common School Work.*—English, (including reading), penmanship, arithmetic, and spelling.

*Printing and Publishing.*—Typesetting, proof reading, press feeding, editorial writing, and reporting.

*Drawing.*—Mechanical drawing, free hand drawing, and cartooning.

*Telegraphy.*

We have a long list of occupations which Capt. Joseph Walsh, our commanding officer, who is an international authority on tuberculosis, has approved as being suitable for men who have arrested cases of tuberculosis. While

we do not have facilities or instructors enough to give training in these varied occupations, the subjects we have chosen are related to a great number of them. Our most popular subjects are auto mechanics and commercial work. We feel that, regardless of a man's occupation in life, he should be able to use a typewriter and also be able to handle an automobile.

We have a plan whereby a patient may enter any class whenever he is physically able without interfering in the least with our regular program. We may use our auto mechanics class as an illustration. Our mechanic has arranged a series of lessons, twelve in number. If a patient is assigned to this department today, he may be compelled to begin studying the ignition system. The instructor continues his work without explaining what has gone before. The patient is then given all of the twelve lessons until he comes back to ignition. In the meantime other patients have been added to the class at various times. They in turn continue class work until they have completed their course. For those who complete the course and want to continue the study, we have an advanced course.

In all our courses, we aim to give the men practical advice about the kind of work they should do when they are discharged from the hospital. We rarely aim to retrain a man absolutely. He usually has done work of some kind; if it is not remunerative enough or if it is too strenuous for him to return to, he may select a relative subject. It is, of course, discouraging to a man to tell him that he must begin training for an entirely new job.

The tuberculous soldier must go back into civil life with a worse handicap than any other class of disabled soldiers with the exception of the blind. He must compete with able-bodied men. His condition is not obvious; he receives no sympathy because to all outward appearances he is sound and well. The average tuberculous man feels that he is perfectly capable of doing anything that he has ever done before, and, if he takes the proper personal care of himself, there is no reason why his case should again become active.

The physicians in the hospital keep close watch on their patients to see that they do not overwork. This is especially true when the men are first assigned to a certain department. Owing to the period of the tuberculosis patient's inactivity, and also owing to the fact that his disease acts as a stimulant to work, he is liable to work too much if permitted free rein. For this reason his weight is carefully watched, his temperature observed regularly, and his general reaction noted.

When a patient is assigned to do reconstruction work, the psychological effect is decidedly beneficial. He is made to feel that he is improving and that it will not be long until he is cured. His optimism is very apparent. It gives him a new lease on life to realize that he can actually do things again. For this reason we arrange to start him on something that he can do with his hands. His creative instinct acts as an incentive when he sees work being accomplished.

In addition to our regular vocational class work, we have the men take therapeutic exercises. The setting-up exercises harden their muscles, give them a good appetite, and improve their physical condition. With this treatment the patients are not so restless and dissatisfied, their food tastes better, and, of course, it is more easily digested.

We also have supervision of all entertainments and recreation for patients. This includes picture shows, quiet games, furnishing of books and magazines, and



Fig. 1. In typewriting even the bed patients find a profitable and interesting occupation.

various entertainment features. These activities tend to keep the patients more contented and happy.

One of the most important results from reconstruction work is the fact that patients are hardened so that when they return to civil life they may begin work at once without disastrous results. After spending several months in a hospital the man becomes flabby, his muscles are inactive, and his entire physical condition is hospitalized. If he is given graduated physical exercises, doing things that are not monotonous but of real interest, under supervision of his physician, he goes out of the hospital with confidence in himself. One physician said: "To discharge a tuberculous patient without systematic exercise would be analogous to sending a man out immediately after splints had been removed from a broken leg."

There has been considerable argument concerning reconstruction work for tuberculous patients. One theory is that patients should be given absolute rest. After nearly a year's experience at this sanatorium in which 429 patients have been treated, the entire group of medical men favor our work. Before this article was prepared, a meeting of all of the ward surgeons of this hospital was held and the subject was discussed at length. They were unanimous in their approval; they gave not a passive acceptance but an emphatic statement that the work has proved a source of real benefit to the patients.



Fig. 2. "Tinkering with an automobile," a congenial occupation for any man, becomes a means of future livelihood.

Physical reconstruction in a tuberculosis sanatorium is of value, not only in the training of the patients, but also in keeping up the morale of the institution. Owing to the fact that men are required to spend from three to nine months in the hospital, they tend to become restless, dissatisfied, and often complain and find fault with everything. When they are given something to occupy their minds, and at the same time made to realize that they are preparing themselves for a better occupation when they return to civil life, they become more contented and satisfied with the institution.

Reconstruction work has been made possible by the energy and efficiency of men like Col. Frank Billings, head of all reconstruction work in military hospitals, Col. George Bushnell, retired, head of military tuberculosis hospitals, and Col. Roger Brooke, Jr., present head of military tuberculosis hospitals, and the stamp of men found generally throughout the Surgeon-General's Office.

I have attempted to make the following points: 1. Physical reconstruction work is primarily curative. 2. The patients are put into classes that will benefit them in after



Fig. 3. Woodworking is among the best of therapeutic activities, as it satisfies the creative instinct and occupies the hands.

life. These classes are selected because of their adaptability to the condition of tuberculosis patients. 3. Patients are carefully watched so that they will not overwork. 4. Exercises are given which will harden the men for active work when they are released. 5. The work and exercises have a tendency to keep up the morale of the institution.

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#### ELECTRICIANS IN DEMAND

##### Interesting Electrical Jobs Suitable for Men with Various Disabilities—Federal Board Offers Training

A returned soldier, whatever his disability and whether or not he has had previous experience, will find some job that will be suitable for him if he is at all interested in the subject of electricity, so great is the present demand for electrical men. It is not surprising that courses in electricity, either in construction, maintenance, or repair, are popular with disabled soldiers. There are at present 178 men taking courses in the general subject of electricity; thirteen are studying bench work and sixty-one are preparing to be electrical engineers.

Disabled men can fill many positions in power plants, such as switchboard operators, substation operators, combustion experts, attendants of auxiliary machinery. Clerks whose duty it is to analyze and record the daily operating charts and compile them into cost records, are being used more and more in electrical plants.



## LETTERS TO THE EDITOR

### Miami City Hospital Meets Climate's Needs

To the Editor of THE MODERN HOSPITAL:

In view of the fact that Miami possesses climate and environment of unusual healthfulness, it seems almost superfluous to speak of a hospital in connection with this great winter resort.

Ills that human flesh is heir to, however, are not always respecters of even the most favorable outward conditions, and to provide for such ill the city of Miami has built a thoroughly modern hospital, furnished it carefully for present needs, and made adequate provision for expansion in the future.

The hospital is built on the unit plan, designed with special attention to the subtropical climate. This means an unusual number of windows and sun porches so that the convalescent may obtain the benefit of the balmy, pure breezes from the Gulf Stream.

The administration and service buildings, together with two ward buildings, have been completed. These are all fireproof, the construction being steel and concrete. Operating rooms, two colored wards (colored patients are segregated), laundry and night nurses' dormitory are temporary structures built of wood, but when the entire plans are carried out these, too, will be of steel and concrete, and fireproof. There will also be separate wards for contagious and epidemic diseases.

There are seventy-five beds in the hospital, providing for both private and charity patients. The operating rooms, the delivery room, and all necessary equipment of the up-to-date institution are ready for any emergency. There is a special operating room for eye-ear-nose-and-throat work. The main kitchen is large and installed with all modern appurtenances, and the diet kitchens are furnished with the best of everything. To date \$150,000.00 has been spent on equipment and buildings.

In 1918 a nurses' training school was incorporated. There are at present ten student nurses; these, with four graduate nurses, are able to take charge of the general work. Private duty nurses are called in when necessary.

The city has been most fortunate in securing as superintendent Dr. J. L. North, who as a general practitioner and a specialist in x-ray work, stands well to the front. He has a complete electrical equipment which he frequently uses for the hospital work.

Other prominent physicians and surgeons place their



Situated on the high pine lands of Florida, the Miami City Hospital has an ideal location.

services unreservedly at the disposal of the hospital.

A site in the suburbs of Miami, high and well-drained, with piney woods close by, was well chosen by the city for the location of its hospital. The institution has its own vegetable gardens, dairy, and chicken run.

During the influenza epidemic in October, 150 patients were in the hospital at one time. The nursing staff, with nurses called from the city, did valiant duty, with the result that the number of fatalities was exceedingly low. Eventually every nurse but one was stricken, and the nurses' places were filled by volunteers, many of these being prominent workers (men and women) from the city.

LILLAH B. HARLEY, R.N.

Matron Miami City Hospital, Miami, Fla.

### A Woman Medical Student in the Far East

To the Editor of THE MODERN HOSPITAL:

I am sending this broken sentence to you. Please excuse me. I can not write English well. I am one of the Korean girls in the Medical School for Women at Tokyo, Japan. My name is Duk Syn Hyun. I know well Dr. Rosetta S. Hall and she helped me for all my future work so I always remember her. [An article by Dr. Hall



Students of the Medical School for Women, Tokyo, Japan.

on the excellent work that is being done in the Hospital of Extended Grace to Women and Children, Pyeng Yang, Korea, appeared in THE MODERN HOSPITAL, October, 1918.] I am a third class now. I do not know what we shall do for Korea; my duty is too heavy, so I study hard always for my poor country.

DUK SYN HYUN,

Medical School for Women, Tokyo, Japan.

### Alice Fitzgerald Represents American Nurses in Europe

To the Editor of THE MODERN HOSPITAL:

Miss Alice Fitzgerald, who has just been appointed as chief nurse for the American Red Cross Commission in Europe, is a Johns Hopkins graduate and was formerly superintendent of nurses at the Robert W. Long Memorial Hospital in Indianapolis, Ind., and superintendent of the Wilkes-Barre City Hospital, Wilkes-Barre, Pa. Miss Fitzgerald went from Massachusetts to England as the Edith Cavell Memorial Nurse. She served with the British in the line hospitals which were often under constant fire of the enemy and was decorated by King George with the Royal Red Cross of Great Britain.

When the United States entered the war, Miss Fitz-

gerald asked for a transfer to the American Red Cross and was sent to organize a hospital in Rimini, Italy, for the Venetian refugees. For her good work there and also for service given in the Messina disaster, she was decorated with the Italian order of the Red Cross.

Early in 1918 Miss Fitzgerald returned to Paris and was made the chief nurse of the Service de Santé, that service which did such heroic work in caring for American wounded in French line hospitals<sup>1</sup>; she has remained chief of this service until her recent appointment and has continued the work of placing American nurses in hospitals and port infirmaries in France and wherever American soldiers needed comfort or care that did not come directly under army medical service.

Miss Fitzgerald speaks both Italian and French well and is thoroughly familiar with European hospital and nursing problems. She possesses a charming personality, infinite tact, and a broad vision. She is an ideal woman to represent the nurses of the United States in the work of reconstruction in Europe.

MARGARET J. ROBINSON, R.N.  
With the American Red Cross, Paris.

### ANALYSIS OF DISABILITIES

#### Figures of War Risk Insurance Bureau Reveal Interesting Data Concerning Disabled

The figures shown in a report on 52,790 claim cases reported by the War Risk Insurance Bureau to the Federal Board for Vocational Education for the period ending April 30, give a fairly accurate indication of the general run of disabilities suffered by the men in the United States, army, navy, and marine corps.

Of eyesight cases there have been 2090, being 4 percent of the whole; of wounds and injuries to leg necessitating amputation, 746 cases, or 1.4 percent of the whole; wound to arms necessitating amputation, 1868 or 3.6 percent of the whole; wounds and injuries to legs not necessitating amputation, 8497 or 16 percent; wounds and injuries to arms not necessitating amputation 3637 or 6.9 percent; wounds and injuries to hands not necessitating amputation, 1961 or 3.7 percent; wounds and injuries to head, 576 or 1.1 percent; hernia, 757 or 1.4 percent; miscellaneous wounds and injuries, 3249 or 6.2 percent; chest complaints and tuberculosis of the lungs, 10,332 or 19.6 percent; tuberculosis of the bone, 377 or 0.8 percent; rheumatism, 1022 or 1.9 percent; heart disease, 3780 or 7.2 percent; epilepsy, 312 or 0.5 percent; nervous diseases, shell-shock, etc., 1919 or 3.7 percent; insanity, 1589 or 3 percent; deafness, 1280 or 2.4 percent; frost-bite, totaling amputation of feet, 25; miscellaneous diseases, 3873 or 7.3 percent; not stated 4900 or 9.3 percent.

#### The "War Beetle" Bed at Belfast

The men employed at Messrs. Workman, Clark & Co.'s shipyard at Belfast completed the *War Beetle*, a standard ship, in 3¼ days from the time of its launch, according to an account in *The Hospital*. The firm was anxious that this smart piece of work should be fittingly acknowledged and asked the men what form it should take. Their appreciation of the Royal Victoria Hospital decided the men to refuse personal gifts and to suggest the endowment of a bed at that institution. The firm have therefore sent a cheque for £250 to endow a bed at the hospital for five years in the name of the foremen, leading hands, and workmen engaged on the *War Beetle*.

<sup>1</sup> See article appearing on page 34 of this issue of THE MODERN HOSPITAL.



#### Cross-Plan in Hospital Building

We are contemplating the building of a fair-sized hospital to serve a rather extensive community, and opinion at present inclines toward a cross-plan in building. Perhaps you will advise us on the advantages and disadvantages of this style of architecture.

SMALL-TOWN ARCHITECT.

Experience of a number of new hospitals seems to have shown that the cross-plan of hospital building works very well providing the wings do not project too far and the corridors are not too long. The principal advantage of a building of this kind is that the center of activity is in the center of the hospital. Another advantage is that the patients get better light, as all rooms get sunshine some time during the day, regardless of the way the building faces.

#### Wall Decorations for Mental Patients

To the Editor of THE MODERN HOSPITAL:

I am very anxious to secure some information regarding color schemes which may be used in decorating a hospital ward for nervous and mental patients.

The ward in question has a corridor about 150 feet long and 12 feet wide, with thirty side rooms opening on the corridor; at either end of the corridor are the day halls.

It was my idea in redecorating the side rooms, we could work out a color scheme which would be of benefit to the class of patients who come to us for treatment.

SUPERINTENDENT OF STATE HOSPITAL FOR THE INSANE.

This very interesting inquiry was referred for answer to Dr. William A. White, superintendent of St. Elizabeth's Hospital, Washington, D. C., who replied as follows:

"In general, I should say that it is better to adhere to neutral pastel tints, and, so far as the effect on the patient is concerned, it would be better to have these tints dull rather than glossy, although the glossy type of paint is naturally much more easily cleaned.

"With regard to the choice of colors, the question is a very difficult one, and I do not believe that we are as yet on sufficiently firm scientific foundations to offer anything very definite. The meaning of colors is a very complicated matter, and, whereas colors have a general symbolism, which is more or less accepted, such as green for safety and red for danger, with the various ramifications of these meanings, still, in individual cases, the color may mean something entirely different to the patient, and so it is exceedingly difficult, if not impossible, to formulate, at this time at least, general principles.

"The lighting effects of the ward should, I believe, be along modern lines, the tendency of which is to do away with numerous bright points of light that are within the range of vision; wards are lighted by reflected light, which produces a general glow and is not tiring to the eye.

"If you are interested in the symbolism of colors, I would refer you to an article by Dr. Evarts in the *Psychoanalytic Review*, for April, 1919, which discusses this subject at considerable length. The article shows what a complicated problem the whole matter is."



## BULLETIN OF THE AMERICAN HOSPITAL ASSOCIATION

### Offices:

728 Seventeenth Street, Washington, D. C.  
308 Anisfield Building, Cleveland, Ohio  
Monthly Bulletin issued by the Executive Secretary  
308 Anisfield Building, Cleveland, Ohio  
HOWELL WRIGHT Executive Secretary

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Mr. Howell Wright, Secretary

### Institutional Membership

One hundred and sixteen institutional members have been admitted to the association and have received their membership certificates. In addition, applications have been received from the following hospitals:

Mercy Hospital .....	Chicago
Lubbock Sanitarium .....	Lubbock, Tex.
Painesville Hospital .....	Painesville, Ohio
Warren City Hospital .....	Warren, Ohio
Faulkner Hospital .....	Boston
Henry Heywood Hospital .....	Gardner, Mass.
City Hospital .....	Columbus, Ga.
Edgcombe General Hospital .....	Tarboro, N. C.
Presbyterian Hospital .....	Chicago

Seven hundred other hospitals are represented in the association indirectly through associate or active membership. A campaign will be commenced shortly to increase the number of institutional members.

### RETENTION OF ACTIVE AND ASSOCIATE MEMBERSHIPS

The records of the association give the following data in regard to associate and active membership:

	Active	Associate
Persons whose dues are paid up until 1919 .....	684	181
Delinquent for one year .....	146	44
Delinquent for more than one year .....	265	109

The following communication has been sent to the first two groups:

"Annual dues for 1919 for active and associate membership in the American Hospital Association are now due. Please make checks payable to Asa S. Bacon, treasurer, and mail them to 308 Anisfield Building, Cleveland.

"Active membership \$5, associate membership \$2. On receipt of dues, a 1919 personal membership card will be mailed to the active and associate members respectively.

"Active and associate members are urged to maintain their personal memberships in the association even though they may be appointed as *voting delegates* to represent *institutional members*. This is not necessary and the institutional members are in no way obligated to appoint those holding personal memberships in the association as their representatives but the retention of present active and associate memberships, held by voting delegates representing institutional members, has this advantage—it insures continual membership in the association.

"Persons now holding active or associate membership in the association and others eligible to either may, under

the constitution, be appointed voting delegates to represent the institutional members. They will have but one vote—namely, as representative of the institutional member. Each institutional member will designate its voting delegates each year and the standing of such delegates in the association ends with each year for which they are thus appointed. Past connections with the association in this capacity does not entitle one to active or associate membership later.

"Active and associate memberships in the association do not terminate with the severance of hospital connections. Such memberships once established continue as long as annual dues are paid.

"As with other similar organizations, all dues of active or associate members in the association, who have been in the service of the army and navy during the war, will be remitted. Since the association has an incomplete record of such active service, members who have been in the service or are still in the service, are requested to so notify the office upon receipt of this notice."

### The Association Acts as the Agent of the American Red Cross in Distributing Dressing Gauze Without Compensation

As authorized by the board of trustees at the last meeting, the American Hospital Association is acting as agent in distributing a large amount of dressing gauze which has been given to the hospitals of the country by the American Red Cross. Dr. John A. Hornsby, Munsey Building, Washington, has been appointed special secretary and represents the association in the matter. He has sent to three thousand hospitals the following communication, which fully explains the plan of distribution:

"The American Red Cross has given to the hospitals of the country through the American Hospital Association a large amount of dressing gauze without compensation. Approximately half of this is to be distributed within one month and the remaining half July 1, 1920. The reason for the delayed shipments is that the amount is so large that it is feared the distribution of all at this time would cripple the gauze industry too seriously. The gift is subject to the following conditions:

"1. Transportation from the Red Cross storehouses to the hospital is to be paid by the hospital receiving the gauze. (The gauze is stored in various parts of the country, so these charges will not be excessive.)

"2. Distribution is to be made in proportion to the philanthropic work of the hospital and to be based on both free and part-pay service.

"3. The hospital receiving this gauze, is, as far as is possible and proper in carrying on the philanthropic work of the community, to give preference to soldiers, sailors, and their families to the extent of the full value of the gauze received and, as far as is feasible and practical, to do this in cooperation with the local Red Cross officials.

"In order to make the allotments of gauze on this basis, it is necessary for the American Hospital Association to have the information indicated on the accompanying sheet."

The sheet accompanying the communication asks for information on which to base the allotment of gauze. The hospitals are asked to state whether their organization is United States, state, municipal, private corporation for profit, private corporation not for profit, maintained by church or maintained by any other organizations. They are also required to give the number of beds;

the days of treatment given, the per diem cost, and the total cost for free, part-pay, and pay patients, the total cost of operation of the hospital and dispensary for the last fiscal year; the total receipts from operation (from patients, etc.); the operating deficit; and the means by

Has your hospital applied for institutional membership in the American Hospital Association? The organized assistance of American hospitals in the solution of public health problems was never needed so much as now. Institutional membership in the American Hospital Association benefits both the individual hospitals and the public health. For information write the secretary.

which this deficit was made up, whether by endowments, subscriptions, etc. They were asked also if they renovated their dressing gauze for re-use.

#### 1918 Proceedings

Page proofs of the 1918 proceedings have been read and the complete copies will be distributed at the earliest possible moment. One copy will be mailed from Chicago to each of the life members and to each active and associate member whose 1918 dues are paid. Three copies will be sent to each institutional member. The publication has been carefully edited and certain irrelevant and immaterial matter eliminated.

#### 1919 Convention

##### HOTEL RESERVATION

Have you made your hotel reservations? The Hotel Gibson will be the headquarters, where the majority of the section meetings will be held, but a number will be held at the Hotel Sinton, across the street. The dates of the convention are September 8, 9, 10, 11, 12, 1919.

Other hotels and rates are given below. See map for location. (Rates for Hotel Gibson and Hotel Sinton were published in the May and June bulletins.)

Hotel Alms, McMillan and Alms Place, American plan, 150 rooms—	
Single room without bath.....	\$3.00
Single room with bath.....	4.00
Double room without bath.....	6.00
Double room with bath.....	7.00
Dennison Hotel, Fifth and Main, 186 rooms—	
Single room without bath.....	.75 and \$1.50
Single room with bath.....	1.50 and 2.00
Double room without bath.....	1.50 and 2.00
Double room with bath.....	2.00 and 2.50
Emery Hotel, 150 rooms—	
Single room without bath.....	\$1.00
Double room without bath.....	2.00
Single room with bath.....	2.00
Double room with bath.....	3.50
Grand Hotel, 260 rooms—	
Single room without bath.....	\$1.00 to \$2.00
Double room without bath.....	2.00 to 3.00
Single room with bath.....	2.00 to 3.00
Double room with bath.....	3.50 to 4.00
Havlin Hotel, 190 rooms—	
Single room without bath.....	\$1.50
Double room without bath.....	\$3.00 to 4.00
Single room with bath.....	2.50 to 6.00
Double room with bath.....	4.00 to 7.00
Hotel Metropole, 175 rooms—	
Single room without bath.....	\$1.50 to \$2.00
Double room without bath.....	2.50 to 3.00
Single room with bath.....	2.50
Double room with bath.....	3.50
Oxford Hotel, 78 rooms—	
Rooms.....	.50 to \$1.25
Palace Hotel, 250 rooms—	
Rooms without bath per person.....	\$1.00 to \$1.50
Rooms with bath per person.....	1.50 to 2.00
Princeton Hotel, 103 rooms—	
Single room.....	.75 to \$1.50
Double room.....	1.00 to 2.50
(No extra charge for bath)	
Hotel Rand, 150 rooms—	
Single room without bath.....	.50 and \$1.00
Double room without bath.....	1.00 and 1.50
(Free use of shower and tub baths)	
Single room with bath.....	1.50 and 2.00
Double room with bath.....	2.00 and 3.00
Hotel Savoy, 90 rooms—	
Single room without bath.....	\$1.25
Double room without bath.....	2.50 up
(Free use of shower and tub baths)	
Single room with bath.....	2.00 to 2.50
Double room with bath.....	3.00
Stag Hotel, 95 rooms—	
Rooms.....	.50 to \$1.25
(No extra charge for shower or tub baths)	

##### SKELETON PROGRAM

The program of papers and discussions is now being arranged by the president, and it is expected that a rather complete program will be ready for publication in the August bulletin. The final program will appear in the pre-convention number.

A large part of the program will be devoted to the all-important subject, "hospital standardization." There will be a joint session of the American Hospital Association and the American Hospital Conference, newly organized

as the American Conference on Hospitals (see May number of THE MODERN HOSPITAL, page 360). The American Dietetic Association again meets with the association, and there will be one joint session of these two organizations.

Experience at Atlantic City prompted the suggestion that each section be limited to one general meeting, unless some special reason makes more than one meeting necessary. The president has written the sectional chairmen to arrange their programs at once. So far as possible, all papers will be limited to twenty minutes, and not more than two papers will be read at a given general session. Every effort is being made to promote discussion. Persons will be assigned in advance to open discussion of papers. Special attention will be given to round-table meetings. The president will, on request, make special arrangements for such meetings.

One of the most successful sessions at Atlantic City was an informal meeting of hospital superintendents under the leadership of Mr. Asa Bacon, who has been appointed by the president to preside at a similar meeting this year, which has been tentatively arranged for Thursday, September 11, at 3 p. m., at the University of Cincinnati Medical School. A communication asking for suggested subjects for discussion is being sent to institutional members and others. Prompt replies should be made to Mr. Asa Bacon, superintendent of the Presbyterian Hospital, Chicago. The communication reads as follows:

"A special round-table meeting of hospital superintendents and others is to be an important part of the program of the Twenty-first Annual Convention of the American Hospital Association, Cincinnati, September 8, 9, 10, 11, 12. The date tentatively set for this meeting is September 11, 3 p. m., at the University of Cincinnati Medical School. No papers will be read. The meeting is intended to afford an opportunity for the discussion of everyday hospital problems confronting superintendents and their assistants. The plan of discussion will be similar to that of the meeting held at Atlantic City. The chairman desires suggested topics for consideration at this meeting. Will you kindly make your suggestions on the enclosed postal card and return at once? Every effort is being made to make this session a lively and profitable one and your cooperation is solicited."

It is expected that social and health insurance will be given an important place on the program. Arrangements are being made for a stenographic report of every general session and section meeting. A contract is being considered which, if entered into, should result in the publication of the proceedings within sixty days after adjournment of the convention.

##### LOCAL COMMITTEE

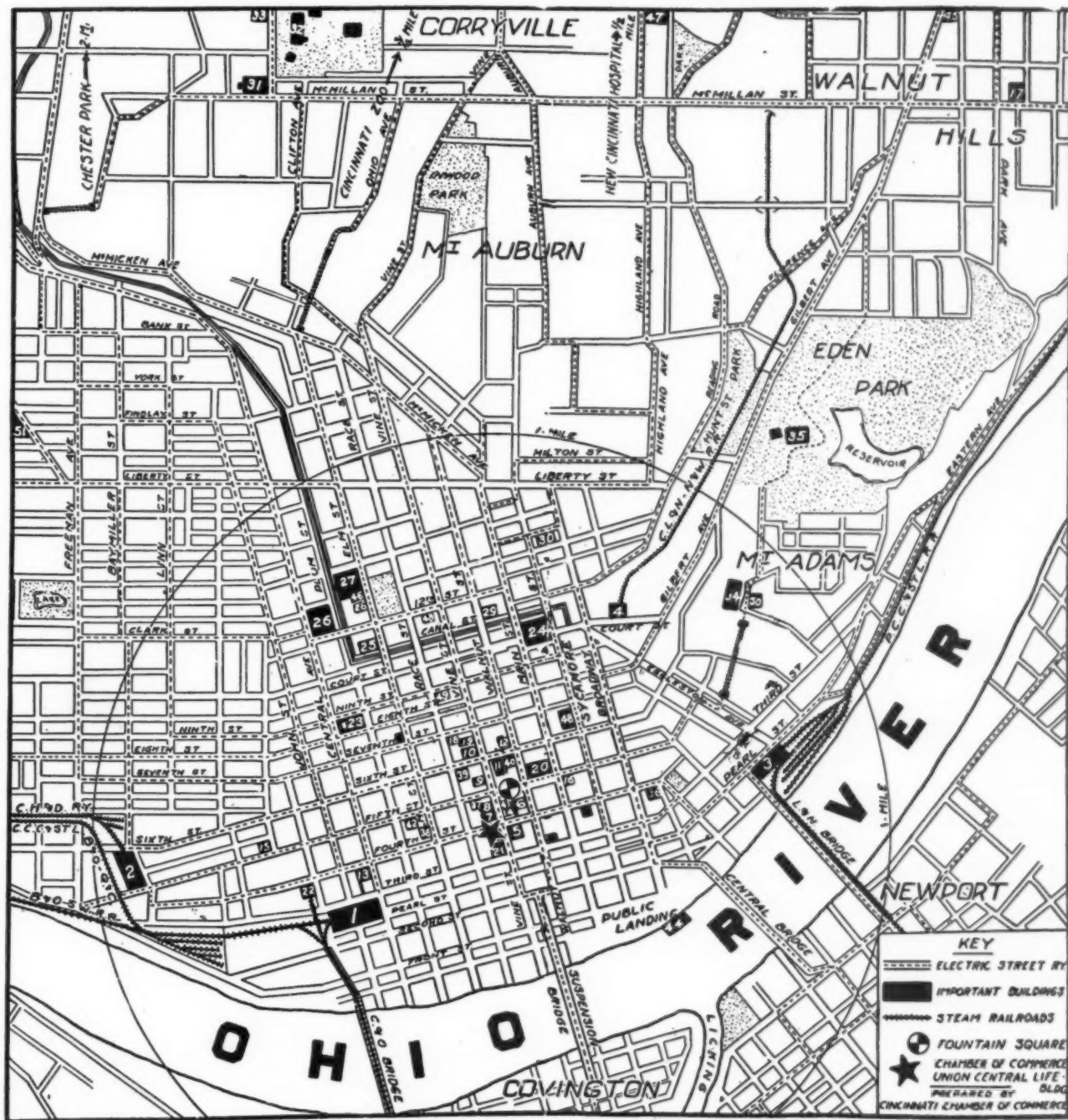
The association is fortunate in its convention city and particularly in its local committee of one hundred members. The chairman of the active executive committee is Maj. C. R. Holmes, of splendid reputation in medical and hospital fields in this country. Other members of the committee are: Rev. A. G. Lohmann, vice chairman, superintendent Deaconess Hospital, Cincinnati; Dr. Walter E. List, superintendent Cincinnati General Hospital; Mr. Walter J. Friedlander, president Hissey-Wolf Machine Company; and Mr. Robert Crane, R. G. Dun Company. The secretary is Mr. Thomas Quinlan, who is secretary of the local convention board. All work of the local committee is centered in the office of the Chamber of Commerce.

Careful arrangements are being made for the care and comfort and entertainment of convention delegates and guests. Cincinnati hotels are actuated at all times by the "come-again" spirit and seek to treat their guests accordingly. The local committee is arranging for a special reception and entertainment on Monday and Tuesday



evenings. Perhaps the most important entertainment feature of the convention will be the visit to the University of Cincinnati Medical School and the Cincinnati General Hospital. Cincinnati hospitals will maintain open house throughout the convention. The August and pre-convention bulletins will contain complete information.

Literature regarding the hotels and about Cincinnati in general will be mailed direct to members of the association. It is expected that many hospital people living within reasonable distance of Cincinnati will wish to make the trip by automobile. Road maps and travel literature will accordingly be mailed. Arrangements are being made



Map of the City of Cincinnati.

Central Union Depot.....	1
C. H. & D. Depot.....	2
Court Street Depot.....	4
Fourth Street Depot.....	22
Pennsylvania Depot.....	3
<b>Hotels</b>	
Alms Hotel.....	17
Dennison Hotel.....	16
Grand Hotel.....	13
Haylin Hotel.....	9
Honing Hotel.....	41
Hotel Emery.....	8
Hotel Gibson (Headquarters).....	6

<b>Depots</b>	
Hotel Sinton.....	5
Lackman Hotel.....	7
Metropole Hotel.....	12
Oxford Hotel.....	39
Palace Hotel.....	10
Princeton Hotel.....	38
Rand Hotel.....	37
Savoy Hotel.....	11
Stag Hotel.....	14
<b>Schools, Colleges, Etc.</b>	
Art Museum and Art School.....	35
College of Music.....	46
Conservatory of Music.....	47

Guilford School.....	36
Hebrew Union College.....	33
Hughes High School.....	31
Lane Seminary.....	45
Ohio Mechanics Institute (Emery Auditorium).....	29
St. Xavier's College.....	48
University of Cincinnati.....	32
Woodward High School.....	30
<b>Other Points of Interest</b>	
Business Men's Club.....	49
Cincinnati Baseball Park (Redland Field).....	51

City Hall.....	23
Court House.....	24
Coney Island Landing.....	44
Hamilton County Memorial Hall.....	28
Music Hall.....	27
New Y. M. C. A.....	25
Old Hospital.....	26
Post Office.....	20
Public Library.....	19
Rookwood Pottery.....	34
Sterling Glass Works.....	50

for central garage accommodations for these automobile parties.

#### MEETING OF DELEGATES APPOINTED BY THE GOVERNORS

The governors will be again requested to appoint delegates to the convention and to provide them with credentials of appointment. There will be special registration of such delegates and a special meeting has been tentatively arranged for Wednesday evening, September 10, at 8 p. m. It has been suggested that the meeting be devoted to consideration of special state hospital problems, including legislation and organization of state hospitals for collective action. The list of state delegates so appointed will be published.

#### NON-COMMERCIAL EXHIBIT

The non-commercial exhibit will be arranged under the direction of the local committee. Miss Alice Thatcher, superintendent of Christ Hospital, Cincinnati, has been appointed chairman of this committee. Other members will be appointed later. The exhibit will be arranged on the mezzanine floor, Hotel Gibson. A bulletin will be mailed shortly to institutional members and others, asking assistance and cooperation in this exhibit. Originality and quality is desired in the exhibit rather than quantity. The following suggestions have been made: (1) hospital pictures of interest showing both exterior and interior of hospital; (2) interesting reports and hospital forms and records; (3) new or original hospital devices or apparatus; (4) economies promoted; (5) exhibits of forms, reprints, and other literature; (exhibits of hospital dolls, models, and nurses' uniforms are not desired).

Hospitals desiring to exhibit should communicate with the chairman of the committee.

#### SPECIAL EXHIBITS FOR ARCHITECTS

A special exhibit of hospital plans, blue prints, pictures, sketches, and models is being arranged in cooperation with the section on hospital construction. Dr. John A. Hornsby, special secretary, will have general supervision and direction of the exhibit. It is expected that there will be a revival of hospital building and such an exhibit will be of great value to the members of the association. The war has given us its lessons in hospital construction and it is hoped that there will be exhibits of war-time hospitals. Special talks on hospital construction will be given by Dr. Hornsby. A special bulletin on this subject will be sent out to architects and others shortly.

#### COMMERCIAL EXHIBIT

The commercial exhibit promises well. Only a few spaces remain unsold in Diagram B but there are still a number of spaces unsold in Diagram A. (See May bulletin). The program is being arranged with a view to giving more time for inspection of these exhibits. One evening has been set aside definitely for this purpose.

#### SKELETON PROGRAM

Monday, September 8, 1919.

3 p. m.: Registration.

Evening: Informal gathering, music, inspection of exhibits.

Tuesday, September 9, 1919.

10 a. m.: General session: Formal opening of the convention, Maj. C. R. Holmes, chairman of the local committee, presiding. 1. Address of welcome, Mayor of Cincinnati. 2. Address, Governor of Ohio. 3. President's address, Dr. A. R. Warner, president.

2 p. m.: Section meetings:

1. Section on out-patient work.

2. Section on hospital construction.

3. Section on nursing.

4. Section on dietetics (American Dietetic Association).

8 p. m.: Reception and inspection of exhibits.

Wednesday, September 10, 1919.

10 a. m.: Joint general session: American Hospital Association and American Conference on Hospitals on hospital standardization.

2 p. m.: Joint general session: American Hospital Association and American Conference on Hospitals.

8 p. m.: Special meeting for state delegates appointed by the governors.

Thursday, September 11, 1919.

Morning: Visit to Cincinnati General Hospital and University of Cincinnati Medical School. Section meetings at the medical school and hospital.

1. Section on social service.

2. Section on dietetics (American Dietetic Association).

3. Section on hospital administration.

3 p. m.: Special round-table meeting under the direction of Mr. Asa S. Bacon, presiding.

Friday, September 12, 1919.

10 a. m.: Joint general session: American Hospital Association and American Dietetic Association.

2 p. m.: General session:

1. Reports of committees.

2. Election of officers.

3. Other business of the association.

Evening: General session: Adjournment dinner with special program of speakers.

### PUBLIC HEALTH NURSES TO BE FURNISHED BY RED CROSS

#### New Relation between Red Cross and Public Health Service Incident to Development of Latter Organization

The American Red Cross, through its Department of Nursing, has entered into an arrangement with the United States Public Health Service whereby graduate enrolled Red Cross nurses will be furnished to the Public Health Service just as Red Cross nurses are supplied to the army and the navy.

This new relation between the Red Cross and the Public Health Service is an incident in the development of the latter organization under a recent act of Congress which is designed in part to meet the growing hospital needs of the enlarged merchant marine. Under this law additional hospital and sanatorium facilities for the care and treatment of discharged and disabled soldiers, sailors, and marines are to be obtained. Not only actual fighting men will be protected by the act, however, but also army and navy nurses, patients of the War Risk Insurance Bureau, merchant marine seamen, seamen on boats of the Mississippi River Commission, officers and enlisted men of the United States Coast Guard, officers and employees of the Public Health Service, certain keepers and assistant keepers of the U. S. Lighthouse Service, seamen of the Engineer Corps of the army, and civilian employees included under the United States Employees' Compensation Act.

In the expectation that the number of patients to be cared for in hospitals of the Public Health Service will consequently be increased by fully 25,000 a year, Surgeon-General Rupert Blue turned to the Red Cross as a source of enlargement for the Public Health Nurse Corps. At present there are approximately ninety nurses employed in this service, but with the cooperation of the Red Cross it is planned to increase the number to at least seven hundred fifty.

Miss Lucy Minnegerode of Fairfax, Va., has been appointed superintendent of the United States Public Health Nurse Corps by Surgeon-General Blue. Her appointment follows closely on a tour of marine hospitals which she made for the Surgeon-General to canvass nursing needs.

#### "Made in Germany"—Not Wanted

There is a soldier at Walter Reed Hospital in Washington who certainly is supporting the boycott of German goods. When he came out of the ether the other day he found a good-sized bit of shrapnel tied to a button of his pajama coat.

"What's this?" he asked in a puzzled way.

"We thought you might like it as a souvenir," smiled the nurse. "The surgeon took it from your leg."

"Take it away," snapped the doughboy. "I don't want anything around me that was made in Germany."



## NEW INSTRUMENTS AND EQUIPMENT

VINCENZ MUELLER, Technical Editor,  
GEO. W. WALLERICH, Associate Editor,

Please address items of news and inquiries regarding New Instruments and Appliances to the editor of this department, 327 Southeast Avenue, Oak Park, Illinois.

### Adjustable Artificial Legs

In a former issue of this journal, the universal adjustable artificial legs were described, which were then produced in this country principally with the view of supplying them to the medical department of the armies of the allied nations in Europe.

After our country entered the war and some of our own soldiers were sent back who had been unfortunate enough to have to have a leg amputated, it was decided by our medical department to supply these men with temporary artificial legs to be worn only until such a time as a special individual limb could be made for each man.

Several manufacturers submitted legs for inspection and tests, and the legs shown here are some of the types which were accepted; a considerable number of them have been supplied.

The manufacturer of these particular legs, however, was not satisfied with making a temporary limb only, and has persisted in bring his product to such a point of perfection that he is now in a position to offer a leg which is a close rival as regards quality and fit to the legs made to measure.

This particular leg is known as the "Pilling leg" and is made in seven sizes; three sizes for below-knee amputa-



Fig. 1. (To left) Adjustable leg for below-knee amputation. (To right) Adjustable leg for thigh amputation.

tions and four sizes for amputations above the knee joint. The inside measurements of the thigh parts are 17, 18, 19, and 20 inches, and these sockets are adjustable  $\frac{1}{2}$ -inch on either side. The knee is made of willow and is supplied with an elk-skin bushing for tapered knee irons. This is built so as to be taken up or readily removed if this should become necessary. The shin piece is made of Diamond State fiber formed into the shape of the leg by a special process which gives to it great strength so as to make it practically indestructible. The lower part of the shin piece, as well as the ankle and foot are made of willow covered with rawhide, and the knee and ankle joints of steel and bronze. The customary rubber inserts in heel and toes are provided, and the toe hinge is made of canvas belting, which is said to be much more durable than the leather ordinarily used. The ankle has a  $1\frac{1}{2}$ -inch dowel 5 inches in length, fitting into the shin piece, thus making it adjustable as to length as well as permitting the wearer to turn the foot in a desired direction.

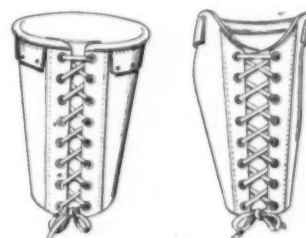


Fig. 2. Soft leather inner sockets, for use with Universal adjustable legs.

Each leg is supplied with two inner leather sockets, thus permitting of a change. These sockets are of soft leather, laced, and adjust themselves readily to the shape of stump of the wearer. They are fastened to the thigh or shin piece by means of laces.

From the foregoing description, it will be seen that it is now possible for a surgeon to secure an artificial leg for his patient practically as quickly and in the same manner as he is in the habit of ordering and receiving elastic stockings, etc., that is, by simply stating the particulars of the case and sending in the measurements of the stump.

### A Non-Rubber Elastic Bandage

A new non-rubber but elastic bandage has recently been perfected in this country. The bandage is made of long fiber sea-island cotton, spun, twisted, and woven so as to give it all the required elasticity, but having the great advantage of outlasting the rubber bandage many times.

The "Ace bandage," as this is commercially known, can be sterilized, boiled, or washed without injury. The porous weave insures coolness and comfort, and the soft feathered edges will not ravel, thus adding greatly to the life of each bandage.

Ace bandages stretch without narrowing, roll evenly without need of reversing, fit comfortably, and exert a constant, firm, and even pressure which can be varied to meet conditions.

They are indicated in most cases where rubber or flannel bandages or elastic stockings are generally used, such as varicose veins, ulcers, bruises, swellings, sprains, weak joints, after the treatment of fractures, and for the building up of stumps after amputating; in fact, in most cases where a support and pressure is needed.

In industrial hospitals the Ace bandage will prove indispensable, because its use in accident cases, such as



Ace non-rubber, elastic bandage.

sprains and dislocations, will relieve the pain, give needed support, and will often allow the patient to continue his work.

In the maternity ward the Ace bandage should be of particular interest, because the 6- or 8-inch width can be used as an abdominal binder; the 4- and 5-inch width makes an excellent breast binder and the 2½-inch or 3-inch width is especially useful in the treatment of milk legs.

In the out-patient department, where cases of varicose veins are treated, the Ace bandage will find its best use, because, if it is properly adjusted, the pressure can be applied where most needed without discomfort to the patient. If the bandage is used in the out-patient department, it is always best to recommend the use of two bandages, so that one bandage may be washed and thoroughly dried while the other is used.

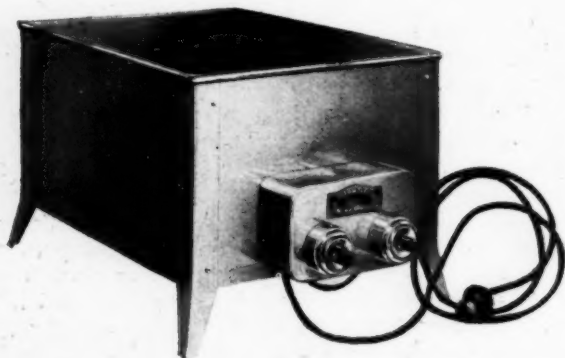
For washing the Ace bandage, only warm water and a mild soap is needed. In this washing process the bandage suffers no damage, but it completely regains its former elasticity—an elasticity somewhat lost by the steady expansion. Care should be taken not to stretch the bandage while it is in the process of drying.

The bandage is made in 2, 2½, 3, 3½, 4, 5, 6 and 8-inch widths, and measures 5½ yards stretched.

#### Serological Water Bath

The water bath here shown, has some new features which have been favorably received by laboratory technicians. The water bath is capable of operating at 37.5 C., for such tests as the Wassermann and also of operating at a temperature of 56 C., for inactivating work.

In the bath illustrated, either of these temperatures may be obtained simply by snapping the switch marked with the desired temperature, making it unnecessary to duplicate the apparatus. These baths are made of copper,



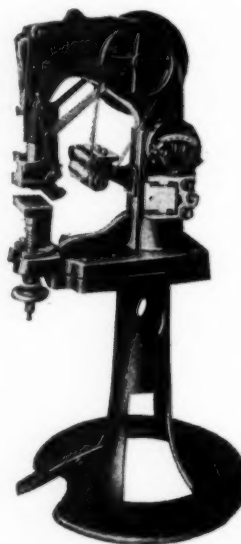
Serological water bath.

heavily nickel-plated. The electric heating element is the immersion type; the element extends the full length of the bath and is entirely surrounded by water. The thermoelect multiple-contact thermostats are used. These thermostats may be repeatedly heated and cooled without the temperature adjustment changing, as they are constructed in a manner in which all stress and strain is relieved in the metal parts in cooling. The contacts are operated at a very conservative current value. The thermostats may be adjusted to operate at any desired temperature, by simply turning the adjustment screw provided under the cap.

These baths are capable of operating on alternating or direct current of 110 volts, and are made in the following sizes: 18 by 12½ by 5 inches, holding nine 22-hole test-tube racks, and 24 by 12½ by 5 inches, holding twelve 22-hole test-tube racks.

#### An Improved Marking Machine

A new model of the National marking machine has recently been perfected, so arranged that the date the linen is put into service can be put into the die and made inter-



Marking machine, Model H-3.

changeable. "Model H-3," as this machine is called, produces a much larger and plainer mark on the linens than the old. It should be used in marking sheets, pillow cases, towels, bed linen, table cloths, napkins and all table linens, blankets, quilts, and, in fact, every other piece of linen or clothing that is to be marked for identification.

The well-known No. 8 power type National marking machine and the hand-operated equipments naturally have their place, but the new model is not limited as to the size of the characters.

All wearing parts have been carefully constructed, and the matter of changing dies is a detail which requires but a moment's time.

A tuberculosis hospital building is being erected as a new unit in the Woodlawn hospital group north of Dallas, Tex. The building will care for seventy patients, and will receive patients in both early and advanced stages of the disease. The cost of the structure will be shared equally by the city and the county of Dallas.